

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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BALTIMORE, JULY 27, 1905.

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Manufacturers' Record.

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BALTIMORE, JULY 27, 1905.

The Manufacturers' Record has
opened an office in New York at 52
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READERS AND ADVERTISERS.

Mr. James W. Stringfellow, pig-iron, steel castings, coal and coke, American National Bank Building, Richmond, Va., in renewing his subscription to the MANUFACTURERS' RECORD, says:

I take a great deal of interest in reading this paper, and don't hesitate to say that I think it is one of the best mediums for the advancement of the South's interests of any paper that I know of.

Mr. Clarence E. Cordner, Cordner's Steam Dye Works, Martinsburg, W. Va., writes:

I think the MANUFACTURERS' RECORD a most valuable publication and well worth reading.

Brobston, Fendig & Co., real estate, Brunswick, Ga., write:

We certainly have found the MANUFACTURERS' RECORD an excellent medium in which to advertise property and reach interested parties, and highly recommend it.

W. H. Porter, president of the Berea Real Estate & Improvement Co., Berea, Ky., writes:

I receive the MANUFACTURERS' RECORD regularly, and can assure you that it is a welcome visitor to my desk, and I think the people of the South owe to you a debt of gratitude for your efforts in the development of the resources of this great country.

G. R. Farnham, Evergreen, Ala., writes:

It affords me great pleasure to express my appreciation of the invaluable service you have rendered the South in presenting in a forceful way her industrial advantages and progress. But above and beyond that you have been at all times alert to her moral and intellectual advancement along right lines. You have impressed her people not to bow down to the Moloch of materialism at the sacrifice of principle, not to esteem the accumulation of money above character and civic righteousness, either in the individual or the State. In this you have been unwavering in your fidelity to the best traditions of the South, and for this she owes you a debt of lasting gratitude.

SOUTH'S LABOR SHORTAGE.

First-hand opinions about the labor situation in the South, given in last week's issue of the MANUFACTURERS' RECORD and continued this week, emphasize in many instances that the shortage in the supply of labor is due not merely to the unwillingness of many negroes to work at all, but also to the fitfulness of many actually at work. This trait has long been recognized as one practically monopolized by the negro. Moral suasion alone has been unable to correct it. It indicates a tendency of the negro to relapse toward the barbarism and indolence from which he was rescued through the discipline of bondage, and seems to demonstrate that much of the money and much of the effort expended during the past 40 years upon substitutes for that discipline have been worse than wasted. Suddenly removed from bondage, the negro required, above all else, for his welfare and proper progress, training in self-reliance and in the working out of his own salvation. But the trouble has been that he has been taught exactly the contrary, and the spirit of dependence upon others has been cultivated in him at the expense of habits of persistency and diligence forced upon him in bondage.

The remedy for the present situation, to the advantage of Southern industry and the negro alike, lies in compelling the negro to self-exertion. He must learn that he must work regularly or he will be given no work, and the quickest way to teach him his lesson is to confront him with men possessing the race sense of thrifty energy. How that is being done and the results promised in such a policy may be learned from a letter from Mr. Sam Park, president of the Industrial Lumber Co. of Beaumont, Texas. He writes:

I consider this is one of the most important questions which we have to deal with in the South. There is no doubt but that the shortage of labor is largely responsible for holding the South back in manufacturing. Our present daily employment at our mills is 775. About 8 per cent. are colored and a large per cent. of the remainder are Italians. We are now able to run full time. Seven or eight years ago, when we worked 60 per cent. colored labor, we were only able to run about 20 days in the month. We have long since abandoned the idea of operating our plants with colored labor, as they cannot be relied on.

Here is a company which of its own initiative has solved the problem for itself. By reducing its negro labor to the minimum and substituting for it any white labor available, including Italians, it is now able to run full time, whereas when 60 per cent. of its labor was negro it lost one-third time. The supplanting of the negro by other races is likely to become more and more popular and practicable throughout the South up to the moment that the negro suddenly awakens to the fact that he cannot obtain work for even one day to save him from compulsory labor for the State under the enforcement of vagrancy laws. At that moment the long-needed reform of the negro will begin, and the mass of the race will

immediately appreciate the advantages of following the example of their fellows who have been willing to imitate the virtues of the Caucasian.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 58, 59 and 60.

SOUTHERN IMMIGRATION.

No point in the country, with the exception, perhaps, of Boston, seems more interested at present in immigration to the South than New York city. Long-continued work for Southern settlers on the part of individuals having as their main object the healthy upbuilding of the South have given an attractive argument to others, hitherto unheard of in that connection, in their direct or indirect suggestion that the congestion of foreign elements in such cities as New York, elements markedly distinct in their characteristics from the foreigners which were so effective in building up the West, may be relieved by turning the incomers into the South. The so-called National Civic Federation of New York has taken a hand in the matter, and with the assistance of a news service of that city and other agencies is booming a conference on immigration to be held in the fall to which governors have been invited to send delegates. Coincidentally State and municipal authorities and newspapers of the South are receiving circular-letters from an organization in New York known as the Society for Italian immigrants, tendering its good offices, as a charitable organization, in the emergency, its purpose being announced as "the cause of benefiting the immigrant by inducing him to settle where he will live most healthily and happily."

The MANUFACTURERS' RECORD knows little about this society beyond the fact that it has come into public notice within the past two or three years as the pressure of Italian immigration has become greater as such Eastern centers as Boston and New York. In the same period what seems to be a well-equipped and thoroughly-organized campaign in this country and in Italy for the diversion of Italian immigration to the South has been brought to the attention of the South and has caused it to begin to study the situation carefully. The circular of the Society for Italian Immigrants seems to be upon a basis of "organized philanthropy." We have come to view with extreme caution "organized philanthropic" efforts in behalf of the South originating in New York or elsewhere, however business-like their aspect. For such efforts, no matter how kindly disposed and well conceived they may be or how lofty and altruistic their purpose, might, in the very nature of things, not result to the South's advantage. We believe that the question of Southern immigration should be upon an absolutely business basis, with the advancement of the South and its whole welfare as the main object.

Individuals or groups of individuals in the South are likely to follow their own bent in this matter, but in our opinion the general work and the broad work for immigration to the South should be led by special State authorities, or, where there are no such officials, by carefully-selected and capable representatives of the agricultural, industrial and commercial interests of each individual State co-operating heartily and intelligently with transportation companies and other Southern organizations that have already demonstrated their ability in this respect and having at heart solely the welfare for all time of the respective States. Such officials or representatives, falling in as slightly as possible with plans of the national government or of "national" organization, should make use of outside agencies, volunteering their services only as adequate knowledge and good judgment may indicate that the South may thereby be benefited.

The general plan to be followed should be to attract as rapidly as possible through direct work in other parts of the country or abroad immigrants who in bettering themselves by moving to the South will be likely to benefit the South and not become either a burden or an influence for ill.

THE SOUTH NEEDS MEN WHO WILL WORK.

New York is advertising for 50,000 farm laborers to help to harvest the crops; Canada is offering a liberal commission or bonus to immigration agents for every man, woman and child that will locate in that country; Pittsburg sends out a dispatch telling of the great scarcity of laborers and mechanics to carry on the vast building and industrial operations of that city. The Southwest is busy and prosperous, with farmers rejoicing with an abundant harvest and with railroads crowded with overflowing traffic. From every part of the South the same story comes, and everywhere there is a cry for men. In the cotton fields, on rice and sugar plantations, on the trucking farms, in the mines and the furnaces and in the lumbering camps and the cotton mills there is a scarcity of labor. Building operations are delayed by the inability to find carpenters and bricklayers, even though extravagantly high prices are being offered. In the central South it seems almost impossible to secure a sufficient supply of laborers to increase the development of manufacturing and mining to the extent which the pressing consumptive demand justifies. It is no longer the South alone bidding for laborers, but every section is competing to secure a sufficient number of hands to do the work that needs to be done.

How shall the South meet this condition? That is a great problem which every business man in the South, whether he be manufacturer, railroad operator or farmer, is facing. It is true that there are in the South, as elsewhere, a great many idle men, idle

because of laziness and thriftlessness. It is true that the high wages now being paid enable the negro to work three or four days out of the week and loaf the balance of the time, instead of working six days out of the week as he did when the rate of wages was lower. Shall we not throw wide open our gates and bid the worthy immigrant of every clime a welcome? The MANUFACTURERS' RECORD has seen and appreciated the value to the South of the better class of Italian labor, for instance; it has seen their merits as farmers, as cotton-growers and as day laborers, but it has looked with some fear upon the possibility of the turning of a great horde of the lower classes of Italians or of other European stocks of similar grade into this section. Yet the South is unquestionably up against a stone wall. It must have more laborers; it must have them in great number, not only because their competition would make better laborers of the negroes, but because even if all the negroes worked six days out of the week they would still not be able to carry on the full development of business now possible before the South. A few days ago one of the foremost iron men of the South, a man of careful thought and judgment, a leader in activities in the Birmingham district, where there is now a pressing demand for at least 5000 workers, discussing this question with the MANUFACTURERS' RECORD, said that he was inclined to put aside the fears that he had had of the incoming of too many foreigners and welcome anybody and everybody who was able and willing to do the work; that the South could provide work enough to assimilate a million new people a year for the next 10 years without catching up with the full possibilities of expansion in trade and industry.

This question of immigration or of sufficient labor to meet the pressing needs of the hour is the vital question of the South today. It demands the best thought of the best people of the whole South; it demands the hearty co-operation of business men and business organizations and railroads, municipalities and State governments. The time has come for some broad and comprehensive plan, but this plan must be handled in the interest of the South, not in the interest of others.

THE BRITISH TERROR.

More than half a century ago English dreamers undertook to turn English possessions into competitors with the South in cotton-growing. They failed. The experiments, half-forgotten, have been renewed in recent years with comparatively no better chance of success. But the later experiments are believed in some quarters to be quite valuable as aids in depressing the price of American cotton. So it has become the fashion in the last few years, a few weeks before the movement of the crops to market, to send from England, and to publish under government auspices sometimes, glowing reports of the prospects of cotton manufacturers of Europe becoming independent of American cotton-growers. The thing has been done this year as in the past three or four years. One of the reports began thus:

An earnest and apparently well-organized movement has been started by the cotton manufacturers of Great Britain which should be vigilantly watched by growers of cotton in the United States. The purpose is to encourage the growth of cotton in the British possessions and countries other than the United States when natural conditions favor profitable cultivation, in order, as the London Times declares, that the cotton manufac-

turers of Europe may be liberated "from the intolerable yoke of the American speculator."

The American speculator, to be sure, is a terrible fellow, but not nearly as terrible as British competition in cotton-growing, and not nearly as much of a speculator. The annual dose is so easily identified and has become so thoroughly discounted that it is amazing that American newspapers, especially those in the South, give any longer heed to it, even though it may filter through a government department. There has, to be sure, been added this year a bit of spice to it in the alledgment that wily Wu-Ting-Fang is behind the alleged boycott of American goods in China, calculated to reduce the sales of American cotton goods there, and, consequently, to reduce the price of the raw cotton. But Southern cotton-growers have learnt a thing or two about cotton news that comes under the water. They have learned to act together for their best interests as never before, and are becoming more and more strongly convinced that it is to their interest to improve their methods of cultivating crops as well as of handling them. They are working now not for a particular season, not to meet an immediate exigency, but toward placing cotton-growing upon a conservative business basis that will benefit grower, manufacturer and consumer alike. They have learned to laugh at the British terror.

MOTOR CARS IN THE SOUTH.

It is plainly indicated by the amount of interest displayed in all which is published concerning them that there is a strong demand for railroad motor cars propelled by some other power besides electricity; some form of energy which does not require a power-house to produce it. The reason for this demand rests in the fact that neither poles, wires nor expensive electric plants are necessary to operate such vehicles, but that they are as independent as any locomotives, each generating its own power and doing its work always under the control of its engineer without relying upon distant machinery which might fail at any time, leaving its helpless. To be sure, locomotives occasionally break down, yet the incapacitating of one does not halt operations on an entire line as a failure at a power-house would. But it is the evident comparative cheapness of establishing railways to be operated by motor cars which commends them to many projectors of lines upon which traffic would be too light to warrant either steam locomotives with trains or individual electric cars. There are many places where cheaply-built railways could be constructed, and by means of motor cars operated with advantage and profit to the communities they may be designed to serve, yet to install more costly plants would be only to invite financial ruin and collapse of the enterprises. A certain density of traffic is necessary to the maintenance of electric railways or of steam roads, but it need be much less to sustain a line operated with motor cars. Moreover, these new vehicles can be installed for supplemental service on existing steam roads without special preparations or alterations of track.

Several types of railway motor cars have already been developed, probably the most notable in this country being that recently built at the shops of the Union Pacific Railway at Omaha, Neb., where, according to the quoted statement of an officer of the Southern Pacific Company, six more cars of similar pattern are under construction and will

be used on various lines of the latter system in Texas, the first completed to be placed in service between Houston and Galveston. These motors, operated by gasoline, with electric sparkers, are capable of a speed of 35 miles per hour, but if desired they can, after some slight changes, be equipped for speeds of 60 miles per hour. It was found, however, that with the lower speed the experimental car could easily maintain the regular passenger schedules upon the lines on which it was thoroughly tested. It is now at the Lewis & Clark Exposition at Portland, Ore., and after awhile it is to make a tour of the entire country; but the other cars designed for the Texas lines will soon be in practical use, and the results of their operation in regular business is being awaited by many railroad men and projectors of railroads with even anxious interest.

Thus it appears that the South will witness the first practical and regular operation of gasoline railway motor cars on this side of the Atlantic, although some other railroad companies, including the Illinois Central, contemplate their use for suburban travel in and out of Chicago, where frequent service is necessary, and already there are anticipations that the use of these new-style vehicles will not only lessen the number of electric railways to be built, but will have the effect of reducing the output of steam locomotives, taking their place in branch-line service. A little experience with motor cars will doubtless soon make apparent the limit of realization for these expectations, but it is probable that these self-propelled coaches will find a circumscribed field of work to which they are better suited than any other variety of locomotive, and that steam and electricity will still control their natural fields in transportation work, the former for heavy loads at comparatively long intervals and the latter for frequent service in well-populated districts, the gasoline car finding its career of usefulness somewhere between the two extremes.

But the demand for motor cars within the last three or four years has caused the building of some odd types. One of them lately constructed for a line in Scotland is merely a small locomotive at the end of a passenger car, the engine wheels operating as the forward truck of the coach. This is in effect only a more powerful steam dummy, and the idea of using dummy cars for branch-line service was developed and worked out years ago, with the consequence that few remain in operation. The gasoline car, however, makes it no longer necessary to carry the weight of a boiler and water, and therefore is considerably lighter and more agreeable to ride in. Whether the reduction of weight and the absence of heat in the new cars are sufficient to overcome all objections which existed concerning steam dummies can only be demonstrated by use in regular passenger business, and that will doubtless be right soon.

WORKING FOR THE SOUTH.

At his own request, Capt. J. F. Merry of Dubuque, Iowa, assistant general passenger agent of the Illinois Central Railroad and the Yazoo & Mississippi Valley Railroad, has been relieved of all duties in connection with the passenger work of the allied roads in order that he may devote himself to matters of wider scope. He has been appointed general immigration agent, with headquarters at Manchester, Iowa, and will have full charge of the important work of directing immigration

to the territory tributary to the two roads. For several years Captain Merry has been active along this line, and his work has been effective in inducing a large movement of settlers into the lower Mississippi valley, whose success is one of the best advertisements for immigration to that section. It is expected, therefore, that as special immigration agent he may do even greater work for Southern development.

SOUTHERN FARM MAGAZINE.

In a review of the work done in the past year by Maryland for immigration, the *Southern Farm Magazine* in its August issue shows what may be accomplished in that direction by systematic and well-directed efforts. During the year 4033 persons were brought to the State, of whom 3276 were from abroad, and they bought, principally on the Eastern Shore and in the southern part of the State, 19,814 acres of land, ranging from \$10 to \$30 an acre in price. To be sure, this movement was partly the result of careful work done during the past few years, and for it was largely responsible the circulation of pamphlets descriptive of Maryland's opportunities and published in English, German, Danish, Dutch, Swedish and Norwegian. But the coming of so many settlers meant an addition to the potential wealth of the State of more than \$4,000,000, while the sale of nearly 20,000 acres of land alone represents a wonderful return upon the investment of \$10,000 a year for the conduct of the bureau. In Virginia one railroad company alone induced more than 400 Northern farmers to settle. These are a couple of instances of the work being done for immigration to the South, other phases of which may be found in nearly all the States below the Potomac, especially South Carolina, Alabama, Mississippi, Louisiana and Texas. North Carolina, too, and Florida are waking up to the importance of the question, with which the *Magazine* deals editorially.

In his monthly talk with farmers Col. J. B. Killebrew, in addition to giving some practical suggestions about work in August, deals at some length with the part which the rising generation of boys of the South are to play in the development of their section. Prof. Andrew M. Soule discusses alfalfa, grazing for lambs, feeding calves, fertilizing corn at the last working and other practical topics.

The regular departments of the *Magazine* are full of matter of interest to men and women in town and country.

The *Southern Farm Magazine* is published monthly by the Manufacturers' Record Publishing Co. of Baltimore, Md. Price \$1 a year.

LOUISIANA SULPHUR.

The development of the sulphur interest of Louisiana, making that State probably the dominant factor in the sulphur world, adds one more to the long list of industries in which the South is taking the lead. The MANUFACTURERS' RECORD has repeatedly referred to the development of the Louisiana sulphur mines and the methods adopted in the development of this industry. The *Engineering and Mining Journal* in a recent issue, quoting from the *Zeitschrift für angewandte Chemie*, points out what has already been accomplished, and in an editorial on "The Louisiana Sulphur Industry" says:

"In this issue we publish a translation abstract of a paper on the same subject by Lunge, the dean of the sulphur-acid industry. Both papers agree substantially in recognizing that American sulphur production is of extraordinary importance, and that it must play an influential part in the world's supply. It is especially interesting to note from the present paper how the matter is regarded from the Euro-

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pean standpoint and by the leading authority. The engineering skill, stimulated by the necessity of exploiting an apparently inaccessible bed beneath quicksand, and the ingenuity of the process, finally developed to a successful issue, are alike accorded the high praise which they deserve. Irrespective of whether the Louisiana deposits are as huge as they are supposed to be, and whether the Frasch process will succeed in extracting a satisfactory percentage of what there really is, this new sulphur supply is certain to be a great factor, perhaps the dominant factor, in the world's trade in that substance."

From the report quoted by the *Engineering and Mining Journal* we take the following:

"The Union Sulphur Co. at the present time has steam boilers with an aggregate of 13,500 horse-power. The sulphur is melted at a depth of 240 meters (787 feet); from this it rises naturally 120 meters, and is then pumped into immense wooden vats on the earth's surface. The boilers were at first fired with coal, and consumed one ton of fuel for three tons of sulphur produced. They are now fired with oil, a reservoir of 200,000 barrels capacity (about 350 pounds per barrel) having recently been installed. Although the use of this fuel entails but little manual labor, yet there are no less than 600 men at work on the wells, the work being carried on continuously, day and night. The average production now exceeds 1000 tons a day. There are four batteries of wells, each easily capable of raising 400 tons a day (or in emergency and without strain even 630 tons). A fifth will be put in operation in two months' time, thus giving a possible aggregate daily production of over 3000 tons.

"There are 40,000,000 tons of sulphur on the estate of the company, and the latter expects to furnish the whole world's supply. A daily production of 1000 tons represents 350,000 tons per year; the export from Sicily in 1902 amounted to 467,319 tons, that of other countries being insignificant in comparison. Hence Louisiana even now produces two-fifths of the world's supply. When we consider that it has risen to this position in only a few years, and that the large-scale production dates only from 1902, there seems no reason to doubt that the figure of 450,000 tons per annum (or even 500,000) will be reached.

"The effect on the Sicilian sulphur market can be foreseen. A lowering of the price may to some extent increase the consumption, as sulphur may be again used in some instances where pyrite is or has been employed; also the recovery of sulphur from the Le Blanc soda-waste (alkali-waste) will be unprofitable. But even with such conditions, the resulting increase in the production of sulphur will hardly be sufficient to maintain the present prosperity of the Sicilian sulphur industry, and the wages of the workmen, poverty-stricken as they are even now, will suffer in proportion.

"The United States is provided by nature with nearly all the raw materials for chemical and other industries more abundantly than the European industrial countries. Potash salts only are entirely wanting. Until recently sulphur was not available in anything like sufficient quantity; but this want has been supplied, and now America will presumably cease, largely, if not entirely, to import sulphur and pyrite, and will, at least in part, supply Europe also."

SOUTHWESTERN PROSPERITY.

Mr. E. F. Swinney, president of the First National Bank of Kansas City, in a recent interview discussing the great prosperity of the Southwest, embracing,

as he described it, the territory between the Missouri river in Missouri and the Rio Grande, including Missouri, Kansas, Oklahoma, Indian Territory, Arkansas and Texas, called attention to the marvelous prosperity of that whole district. Reviewing the business condition of that section, Mr. Swinney said:

"The Southwest is developing fast, marvelously fast. Everything is going as it should. The right kind of people are coming in; they are spending their money in the right way. Crops are good, and have been good for a series of years.

"The development is along all lines. The railways are extending their lines, relaying or doubling their tracks, buying new equipment to handle steadily increasing business.

"The people are improving their farms and homes and buying more land. The cost of luxuries they purchase is a small fraction of the amount they spend for acquisitions of value. The New York stock quotations do not interest them.

"Factories, favored with cheap coal, fuel oil and natural gas, are springing up like mushrooms. The Southwest, like all new sections, is more a consumer than a producer of manufactured products, but the time is rapidly nearing when farming implements and other products of skilled labor will be made at home.

"Wheat, corn, cotton, cattle, oil and minerals are among the sources of wealth. The great results spring from the combination of unexcelled natural conditions and the people, the best business men in the world. In the Southwest the alert and thrifty Northerner meets the chivalrous and enterprising son of the South and the bold, reliant, open-hearted Westerner.

"The next quarter of a century will bring more wonderful progress in this region than all the past. The corn crop last year west of the Mississippi was 1,000,000,000 bushels; wheat exceeded 400,000,000. The very grasses, turned into hay, netted a stupendous sum. The annual output of all the gold mines of the world pales into insignificance before the product of the golden fields of wheat, and all the silver produced is less than 16 to 1 when compared to the white kernels of corn."

Wants Cotton Harvester Built.

The MANUFACTURERS' RECORD has received a letter from J. B. Underwood of Fayetteville, N. C., relative to a cotton harvester which he has invented. Mr. Underwood wants to contract for building a machine so as to make a practical test of it in the field this season. He states that the manufacturer he engages must have a well-equipped shop with modern machinery, so that the machines can be duplicated in quantity as wanted. The working drawings are to be made by the shop draughtsman and approved by the inventor, from which the shop will be expected to make perfect working parts.

Will Need School Furniture.

Manufacturers of school furniture will be interested in the following information: There is now pending in the Georgia legislature a bill to establish a system for public schools for Pierce county, and it is expected to be adopted and in operation by September 1. In this event the board of education will want school desks and seats and supplies for about 30 schoolhouses. Manufacturers who desire to investigate this opportunity can address J. A. Harper, county school commissioner, Blackshear, Georgia.

The Pittsboro (N. C.) Commercial Club has been organized with Messrs. F. C. Poe, president; Jacob Thompson, vice-president, and G. W. Hanks, secretary and treasurer.

Huntington: A Reservoir of Productive Energies.

[Special Correspondence Manufacturers' Record.]

Huntington, W. Va., July 24.

Without intending disparagement to the other cities of West Virginia—for observations so far made indicate the entire State to be in the flush of a great development—I am moved to record that Huntington seems to hold promises of a really wonderful future. There is no better-located town on the Ohio river, to begin with, both as to geography and in a topographical way. This city is the creation of Collis P. Huntington, and with the rare genius that enabled him to see all sides of any situation he chose this spot in the full knowledge of the development that was to occur. Now, but little more than 30 years after it was founded, Huntington was, according to the figures of the census of 1900, second in population among the cities of West Virginia, being exceeded by Wheeling alone, and there are indications in abundance that its growth and development have really only just begun.

Geographically, it is vastly favorable to a large development, in that a wide territory of the finest coal fields and hardwood timber areas in the world is tributary to Huntington, first by the Big Sandy and the Guyandotte rivers and their branches, and next through the railroad construction which has logically followed those natural routes.

It is impossible for the ordinary layman to comprehend offhand the vast significance of the developments now under way. It is somewhat as if one were taken back half a century or so and were surveying the situation at Cincinnati, or Kansas City, or Chicago, and were attempting to definitely weigh and circumscribe the conditions then at work for the development of a great trading and industrial center. Even then criterions would be at fault, for the enormous increase in coal and iron consumption per capita throughout the world overthrows old bases of calculation and leaves one bewildered as to what are the possibilities of growth in a community which may draw on the finest coal fields to be found, which has merchantable timber in almost unmatched quantities, and whose fuel and transportation facilities are so advantageous as to make possible an almost infinite variety of industrial development.

Huntington was laid out in 1871, and incidentally, the projector and the engineers not being trammelled by existing obstacles, having a vast unoccupied plain to fashion according to their liking, they laid out broad streets and a succession of regular squares commercially convenient, and there is a stretch of wide valley, reaching from the Guyandotte river to Ashland, containing more fine level building space than is found on Manhattan Island. While the Big Sandy intervenes to make the boundary line of West Virginia and Kentucky, so there will never be one municipality of all the towns which stretch along the Ohio and are connected by an interurban electric railroad, yet in intents they are largely allied already, the lines of separation will grow less distinct, and for commercial and community purposes they will be practically one town. In that 16 miles there promises to be within a half-dozen years or so something like 100,000 souls. In the course of time, not so many years hence, I believe that Huntington itself will have a population of fully that amount. At present it is counted at somewhere between 17,000 and 20,000, and the records of real-estate transfers and permits to build show that the increase is continuous and large. In the territory served by the Tri-State Electric road, which includes Guyandotte and Iron-ton, as well as the cities indicated, there

is an estimated population, based on the latest vote, of over 75,000. So the foundations for a populous center have already been broadly laid.

The increasing importance of the unsurpassed coal fields of West Virginia, Virginia and Kentucky, emphasized by the present great activity in railroad construction through those fields, is the significant feature in the development under way, and the advantage that Huntington will gain is indicated in a study of the construction going on. Ten miles west of the Huntington station of the Chesapeake & Ohio the Big Sandy division of the Chesapeake & Ohio joins the main line of that road at Catlettsburg. This line, as recently pointed out in this correspondence, has already been built into the great undeveloped coking-coal fields of the Elkhorn district, where there are 400,000 acres of the best coal fields known, and from which a shipment of 2,000,000 tons a year are expected to be made, from developments now in sight, within the next five years. It is regarded as altogether likely that within the next few years the Seaboard Air Line interests will connect with the Chesapeake & Ohio at the Breaks of the Sandy, giving a new trunk line from the lakes to the sea.

There is much talk of the Cincinnati, Hamilton & Dayton—Pierre Marquette and Hollis-Zimmerman interests—not only extending a line from Iron-ton to Ashland, crossing the Ohio by a new bridge at that point, but also building a new line from Ashland into the Elkhorn coal fields as well. Whether this is done or not at the present time, there is certain to be a large development of not only the coal and coking interests of Eastern Kentucky, but of the timber interests as well, and as the Big Sandy and the Tug river territory already largely looks on Huntington as its jobbing and trading center, there is certain to be much of advantage to Huntington in the development that is to occur.

The Chesapeake & Ohio extension up the Guyandotte river is even more to the benefit of Huntington, as the road is a Huntington inspiration, conceived and put on foot originally by Huntington people, and opening a territory directly tributary to this town. In the plans of railroad construction now being carried out by the Chesapeake & Ohio road this Guyandotte valley extension is to become a feeder of the most important sort, rivalling in some respects, if not surpassing, the old main line itself. The Guyandotte valley branch is now in operation to Logan Court House, in Logan county. From there it will be extended to a junction at the mouth of Slab fork with the Piney Creek extension, now under construction from Prince Station, on the main line, 73 miles southeast of Charleston. The great importance of this line is indicated by the fact that out of the 170 miles this road will measure between Barboursville and Prince Station, 150 miles of it will be through coal fields, whereas the main line now runs through but 50 miles.

The Norfolk & Western, whose Ohio line, coming down Tug river, crosses the Ohio river at Kenova, seven miles west of Huntington, is also constructing a loop down Pinnacle creek to Pineville, in Wyoming county, West Virginia, which will open additional mines and increase the production of the Flat-Top-Pocahontas coal fields.

What the Deepwater-Tidewater road will do for this end of country no one yet says. Surveying parties are in the fields around here all the time, and it is reported that one of the plans of the Deepwater

road is to build a branch down the Guyandotte from Gilbert's creek, to which point right of way has been bought. It is suggested that in case such a line is built as far as Huntington it will be extended across the Ohio, and either short connections or new through lines will give it outlet at the lakes.

There are other rumors of various sorts, involving the purposes of the non-committal surveyors in the fields, one of which is to the effect that independent parties, included in whom are some Philadelphia capitalists, are proposing to construct a line down the Guyandotte to Huntington.

Whatever the outcome of all these rumors may be, enough is in sight to insure unsurpassed access to the greatest coal fields in the world and to afford assurances of a large development in every line. Industries of various sorts are being located here from time to time, woodworking plants of different kinds are following the railroad construction up the rivers, creeks and coves, and these little trickling streams of production are constantly dripping drops of prosperity into the reservoir a center like Huntington becomes.

Cheap and abundant fuel and ample and economical transportation facilities are recognized as factors of the first magnitude in the upbuilding of any industrial center. In addition to the cheap coal, the unsurpassed coke and the natural gas, and the important transportation facilities of Huntington referred to, there are to be mentioned the Chesapeake & Ohio mainline road, running between Washington and Cincinnati and Louisville; the Ohio River division of the Baltimore & Ohio Railroad, running between Parkersburg and Kenova, and the Ohio river itself, which has always been an important artery of commerce for Huntington, and must become much more so when the long-delayed but doubtless inevitable nine-foot stage of water is secured by river improvements from Pittsburg to Cairo. So Huntington already occupies a highly advantageous position as a distributing point, and in many lines of manufacture this fact, coupled with the cheapness of fuel, which will remain a permanent advantage, gives her a predestined position of high industrial rank.

Huntington's long-established industries include the immense Chesapeake & Ohio car shops with some 2000 employees, where every kind of repair work is done and all kinds of cars are constructed; the Huntington branch of the American Car & Foundry Co., which employs 1200 to 1500 hands and turns out large numbers of steel and other cars, being about the most important plant in that combination; a picture-frame factory that is the largest in the world; already extensive tumbler and window-glass works, that are to be enlarged; woodworking establishments, furniture factories, and including a spoke and handle factory that sells its product all over the globe, and extensive stone and foundry company, machine shops, clay-working plants, etc.

This evident diversification of industries here may certainly be taken as the promise of much greater things to come, since coal supplies will be even more abundant and accessible than before. The natural-gas supply is to be indefinitely extended by additional companies, now piping in, while as low a rate as seven or eight cents per 1000 feet is talked about; the vast hardwood forests of a large section of the Appalachian range are being laid tributary to Huntington as never before, and the construction of new north and south trunk lines will bring supplies of ores and all kinds of raw material from every direction and distribute the manufactured product to the four corners of the globe. There are seven iron furnaces in the Ashland-

Ironton district now. They get their iron ores from Michigan and from Bath county, Kentucky, the local supplies, on which they were started 75 years ago, having ceased to be of importance. These iron furnaces, while not of the largest capacity, are prosperous and are under continuous operation. In addition to manufacturing pig, there are steel plants where billets are made, and there are plants where finished and semifinished products are turned out, such as a sheet-steel plant, and rod, nail, galvanized-iron and bar-wire mills. This indicates the possibilities in the way of iron production in Huntington, which seems really to lack only initiative and enterprise to become another Wheeling, if not almost a second Pittsburg.

It is not my intent to intimate or charge that Huntington is lacking in initiative and enterprise. Quite the contrary is to be recorded as the fact. No town grows by the mere force of natural causes, as, for instance, a forest growth is obtained or a great river is formed. Bricks and mortar and railroads and shops are the results of some man's thought and many men's days' work. Even New York and London were built up in no other way, and the humblest village or hamlet in the land has been brought forth only through one or many human beings' initiative and enterprise. Huntington could never have been the town she is except that a generation of men have, "through long days of labor and nights devoid of ease," devoted their energies to the production of what is here seen today. But of all the places I have lately seen, it seems to me that the people of Huntington of this day are more generally of the pioneer, the elemental class, than those of almost any locality I have found. The men of affairs in Huntington have the hardy, forceful look of rugged pioneers. They are almost entirely men from the not remote districts hereabouts, and they have mostly gone from humble beginnings to the places they have reached. There is no conspicuous wealth here—no inherited fortunes, and not a millionaire in the town. Comfort and a competence are almost universal characteristics of the people here, and everyone being still at work, there is no leisure class. This is all vastly advantageous to the present and prospective growth of Huntington, but it also indicates deficiencies that exist. It has almost always been the invaders—the people from outside, who have seen how things are done elsewhere, and who have accumulated the spoils of warfare on foreign fields, or have learned how to command these spoils—who have wrought the greatest changes in every city on the map. Those "invaders" are not present in Huntington in large numbers today. I believe this accounts for the fact that Huntington and the opportunities it affords are not now better known the world over, and I believe that the advent of outside men and money would result in such a development as Huntington has never before known. And I believe that such an advent will indubitably occur.

In forecasting possibilities it is necessary to take note of what has gone before. Without going minutely into the details of all the industrial operations here, it may be again recounted that iron, steel and woodworking plants are operating here on a scale surpassed in an individual way in but few of the cities of America. Car building of wood, iron and steel is among the most important of these industries. Then in a minor way, though not insignificant at that, there are stone, foundry and machine shops, and there is a firm just branching out from the supply business into the manufacture of a really wonderful and possibly revolutionizing

steam turbine. Jacks used by railroad men and builders the country over have been made here on an entirely different model for a dozen years or more, and these operations in an iron and steel way give a suggestion as to what further may be profitably done. Iron ores from the South and from Michigan and Cuba may be assembled here on practically as advantageous terms as at any other place, for the coal-shipping roads would doubtless be well pleased to bring in ores from the North and South, instead of returning empty cars. Alongside an iron-manufacturing business there could be built up a large machinery industry as well, for Ohio, just across the river, has become the home of skilled workmen and mechanics to almost the extent found in New England itself.

In addition to a tremendous iron interest which is easily possible here, there is almost no limit to the woodworking operations which might be carried on. West Virginia white oak is famous the world over, and its timbers are in ever-present demand. Grand Rapids, the greatest furniture-making center in the world, is hardly better off as to proximity to raw materials than are the States of New England, and North Carolina's High Point, so conspicuous as a follower after Grand Rapids, is poor in hardwoods compared with the wealth of resource that lies in Huntington's backyard, while in shipping facilities and cheap fuels neither place approaches Huntington. There are no such forests of white oak in the world as are found in the section of West Virginia, Virginia and Kentucky which is tributary to this place. Here also is the greatest poplar timber section in the world, and there are dozens of other woods, more or less abundant, which may be utilized for furniture-making and for such articles as spokes, handles, telegraph and telephone pins, veneering, etc.

There is one old-established furniture factory in Huntington, making sideboards, tables and bedroom sets in medium grades, and it is arranging to double the present capacity. There is a factory of office and bank furniture, and there are two new chair factories just come in, one from Manchester, Ohio, which will soon be at work, and another from Gallipolis, Ohio, whose factory building is not yet under way. There are planing mills and the like, and there is the vast picture-frame enterprise mentioned heretofore, but in everything that has been done there is merely a suggestion of the opportunity that awaits. Far-off Herkimer is getting from this section a large amount of the oak timber her factories use in desks and furniture, and comparatively an infinitesimal amount of wood that is worked up into boards in this vicinity and all through the timber section where the railroad runs is shipped out of here in other than the semiraw material form of timber, sawed and dressed.

In these lines of iron and woodworking it would seem there was room and occasion here for a development of almost any extent. But opportunities do not end with these. Based again on cheap fuel and the ease with which the product may be distributed, a branch of the Union Potteries Co. has found this to be the most advantageous location to be had, and there has been constructed and just put in operation one of the most up-to-date and complete plants for the manufacture of seminitrous china which the United States contains. There is a brick building 132x500 feet in dimensions, part of it two stories in height, which cost \$110,000. It is equipped with an automatic sprinkler system that cost \$11,000, and is so good a risk that insurance adjusters have given it a lower rate than any pottery has known. The product will be a general

line of dinner and toilet ware, and it will be the equal of any American goods of the kind. The market for such wares is in the West and South. On account of cheap fuel and superior transportation facilities, it is figured that this plant will be able to operate at a greater advantage than those of East Liverpool, and that Trenton potteries will be unable to approach it in economical production. While the raw materials are shipped in, that is declared to be a matter of minor importance, fuel and transportation being the cardinal points. Kaolins are obtained from Florida and North Carolina, ball clay from Tennessee, and some clays are imported. Because of the transportation facilities here, and because of the cheap fuel—natural gas at eight cents per 1000 feet will be used later on—it is predicted that in course of time other pottery plants will be attracted here, and that Huntington will become a pottery center of the most important sort.

While pottery clays are not found here now—at least, not the kind of which porcelain wares are made, though it is said that prehistoric pottery is dug up all through this valley—yet there are other clays of a superior kind in the vicinity and on the townsite, and besides brick plants there is here a tile roofing manufactory, turning out so superior an article that it is being sold all over the United States from Boston to the extreme Northwest, and even the government is using it on buildings it puts up.

The Chamber of Commerce and the Huntington Land Co. are announcing favorable conditions and a helping hand to all industrial propositions of merit, and in the case of the pottery company most liberal inducements were given. There are large sections of the townsite available for factory locations, and a determined effort is to be put forth, so the statement is made, to induce industrial enterprises to locate here. With a proper advertisement of conditions here it certainly seems that the effort should succeed.

The local movement, one might almost say, the spontaneous activity here, is already very great, reflected in the famine of residences for rent, in spite of the hundreds of new buildings put up every year. Real estate is cheap, though steadily advancing in price, and the favorable rented returns and the constantly enhancing values give an attractive face to operations of this kind. Huntington is always thronged with visitors, so much so that her hotels are crowded all the time; hotel men have got rich and the owners of the leading Florentine are at work on a new \$250,000 hotel.

Huntington is spoken of in a local brochure as "a good town." I am prepared to testify that it is at least all of that.

ALBERT PHENIS.

TENNESSEE COAL LANDS.

Northern and Eastern Capitalists Interested in Their Exploitation.

[Special Cor. Manufacturers' Record.]

Jellico, Tenn., July 23.

Development forces in this section of Tennessee have been greatly augmented during the past few months by the entrance of Northern and Eastern capitalists, and following in the wake of recently completed railroad extensions unprecedented activity is being displayed along industrial lines. Especially is this true in the regions where coal is the greatest factor in drawing new capital. Along the entire stretch of mountainous region contiguous to the Kentucky line and extending through Campbell and Claiborne counties there is a great demand for coal lands, and in the struggle for the most available territory landowners are realizing handsome prices.

The recent completion of the Louisville & Nashville's extension from Saxton, three

miles from here, to Knoxville has opened up a territory rich in coal and timber resources, and along the 40 miles of that line an immense amount of development is taking place. The greater part of the territory is controlled by the Lafollette Coal, Iron & Railroad Co., and the coming two or three years will witness a great transformation when present plans for development are carried out. The new line is not only of great importance in placing this region in touch with development forces, but by giving a connecting link to the Louisville & Nashville's lines furnishes that system with another through line south, extending from Cincinnati to Atlanta.

A coal field that has for many years been looked upon with eager eyes by two of the big railroad systems is now about to be opened up by the Clear Fork Railroad, a coal railroad extending from this place a distance of 14 miles up the valley of Clear Fork river. The Southern and Louisville & Nashville systems engaged in a bitter fight over that region, and each road tried vigorously to obtain first connections. After many scrambles over rights of way, in which much time and money was lost and the courts brought into commission, a compromise was finally effected, and the line is now being constructed by the Southern, while the Louisville & Nashville will have trackage arrangements. Eight miles of steel have been laid, and ties are on the ground for the remaining six miles. It is thought that the line will be completed its entire length by the latter part of August.

Considerable activity in opening up mines is now under way in the Clear Fork region, and the initial tonnage promises to be great. English capitalists are interested in that field, the American Association, which has long been a factor in the development of the Kentucky and Tennessee coal territory, and which is made up in great part of English capital, owning many thousands of acres of coal lands in the new field. This is a leasing concern, and several operating companies are preparing to develop holdings owned by this company.

The Clear Fork line terminates a few miles from the Bennett's Fork Railroad, which extends from the opposite direction and branches out from the Middlesboro Belt Line, which, in turn, connects with the Louisville & Nashville in Kentucky. Both the Clear Fork and Bennett's Fork roads are entirely in Campbell and Claiborne counties, and extend parallel with the Kentucky line, from which they are separated by a few miles. The territory penetrated by these extensions is considered among the most valuable in mineral wealth in Tennessee, and the annual output of coal in this State will be materially increased when mining is fully under way. The Bennett's Fork road was completed nearly two years ago, and an immense amount of coal is already being obtained from that division. W. S. HUDSON.

Another Iron-Pipe Plant.

Several weeks ago the MANUFACTURERS' RECORD referred to the plans of Messrs. James W. Blair, E. L. Douglas, John J. Egan and associates of Atlanta, Ga., for building an iron-pipe plant in the South. It may be stated now that the American Cast Iron Pipe Co. will be the title of the new enterprise, and its intention is to manufacture gas and water pipe from 4 to 30 inches in diameter, the plant to have a daily capacity of 150 tons. The company is now investigating in the Birmingham district with a view to selecting location in that territory. E. L. Linthicum of Anniston, Ala., is to be manager of the plant. It is reported that \$225,000 will be invested.

AGGRESSIVE BUYING MOVEMENT.

Situation Cleared in the Birmingham Iron Market.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., July 24.

The buying movement in iron took possession of the market and held it captive all the week. It was in a state of full-fledged development, and was very aggressive, as the reports of sales attest. The movement was begun with the purchase of a round lot by the United States Pipe Co., which was quickly given currency in the market, and which was promptly followed up by other purchases by the same buyer at advancing figures. Other interests took the cue, and orders began to roll in and increased in magnitude continuously until transactions aggregated a large volume. The price was rapidly advanced until \$11.50 became the basis for No. 2 foundry. The lowest price paid for iron in round lots was \$10.25 for No. 2 foundry, and the highest was \$11.50. These limits represent transactions that covered 140,000 to 150,000 tons. At \$11.50 it seemed as if there was a lull in the buying. There was a lull from the largest buyers, but the buying fever was not abated, for on buying of those interests that tailed onto the movement the market was easily advanced to \$12, with very respectable sales. It is estimated by conservative members of the trade that the total sales of the week will aggregate 175,000 tons. In this estimate the writer fully concurs, and thinks it rather underestimates than overestimates them.

To give your readers a proper estimate of the activity of the market it can be stated that the sales of the Sloss Company for the month up to the 20th were 84,000 tons, and of this amount 67,000 tons were sold after the 14th. Its sales for delivery during August and September were nearly three times the anticipated output during that time. But it was better prepared to make such sales than any other interest, as it had a stock of at least 70,000 tons on its yards unsold when the movement commenced. The buying interest that inaugurated the buying wave took altogether over 50,000 tons. There were good seconds to this action, and buyers of thousands of tons took the place of those who heretofore had been reluctant buyers of hundreds of tons. Very few got in at the rock-bottom prices. Very few are ever fortunate to reach that goal. Many have the judgment, but they lack a leader and they lack the nerve. The Sloss Company says it sold no iron below \$11 for No. 2 foundry, and as far as can be ascertained there was only a moderate amount secured below an \$11 basis. The advent of the wave has very much cleared the situation here. The buying has been mainly for delivery in the next 60 and 90 days, and it has been of such magnitude as to make the furnace interests easy as to stocks in furnace yards. In illustration of that assertion, one furnace interest reports that its sales will prevent it from taking any new business this side of the 15th of October. Another important interest states that it has notified its agents that it can offer but 7900 tons for delivery during August, September and October. It has come to your correspondent from sources entirely reliable that three other interests are in the same boat, and, except in a small way, cannot enter the market for delivery anterior to the middle of October. So all this talk about large accumulation of stocks in furnace yards in this district is simply hot air. From a rather numerous contingent among the buyers comes the request to let them have some iron as soon as it can be shipped, showing that a large part of the purchases will be melted as rapidly as received.

The market is now \$12, and the price is uniformly maintained. The elasticity of prices is shown by the rapidity with which the market recovered prices on active buying. At the present price a large majority of the trade would be willing to have it stand steady. At that price there is very little inducement for those furnaces now out to blow in. But if an advance beyond that should happen they would rush in and demand some of the persimmons and enforce their demands by the prices necessary thereto.

No basic iron was reported sold, but there was a sale of 400 tons of standard steel rails at the standard price. We only mention this to show that our steel rails are in demand in small as well as large quantities. In the buying that has recently developed four interests took about 115,000 tons, and there were others that took lots varying in volume from 5000 tons down to 1000 tons. The buyers developed all the anxiety that was connected with the market, and the sellers scored the winning innings. Towards the close of the week one seller sold 300 tons of gray forge at \$11.25 for delivery the third quarter. At the time other sellers would have taken \$10.50. In the mix-up some mottled (to the amount of 1500 tons) found a buyer at \$10.50. Nos. 2 foundry and soft readily brought \$12 for delivery the third quarter. In the melee the question of price was often a matter of good or bad fortune. We note that Rogers, Brown & Co. are shipping 300 tons to the Isthmus of Panama. The question may be asked, from what source have the orders sprung? The answer is, from the main buying districts from New England to and including the Western States. The pipe works report a comfortable business in the way of small and moderate-size orders, with the market on the basis of \$24 for four and six-inch pipe and \$23 for the larger grades.

The addition being erected by the Dimmick works is rapidly progressing, and its completion is a matter of a few weeks. The new company to be launched is to be called the American Cast Iron Pipe Co. The plant will represent a cost of \$225,000, and its capacity will be 150 tons daily. It will employ about 400 men. It is said that the backers of the enterprise are Atlanta people. It is anticipated that the works will be completed and ready for business early next spring. They expect to make pipe from 4 to 30 inches, and to have a pay-roll of \$15,000 monthly.

During the past week the Dimmick Company brought in several families of Germans, who will be employed at its works. There is no let-up in the complaints concerning the scarcity of labor, and there is plenty of room for all who are seeking constant, steady and remunerative work. Among the various shops there are reports of a good business—in volume all that can be comfortably cared for with the limited labor at call. Hardie-Tynes Company, representing the engine-building trade, reports that the orders already booked give it no time for play.

The Car Service Association reports that the cars handled in June were 1124 in excess of June, 1904, the figures being 58,802, as against 57,668 for June, 1904. The year so far has been one of great advancement, and the promise of its continuance is all that any reasonable person could expect. J. M. K.

Winston-Salem Power Co.

Articles of incorporation have been filed by the Winston-Salem Power Co. of Winston-Salem, N. C., its purpose being to build an electric-power plant to augment the present supply of electricity for power and lighting in Winston and Salem. The incorporators are Messrs. H. E. Fries, F. H. Fries, C. B. Watson and Clement

Manly. They have placed the capital stock at \$125,000.

COAL AROUND STURGIS.

Reports for Negotiations for Properties by Large Interests.

[Special Cor. Manufacturers' Record.]
Sturgis, Ky., July 22.

It is now intimated, with strong evidence of truth, that the Pittsburg coal combine is negotiating for coal properties in this section, since the big deal effected by the North American Company. The combine already controls the De Koven colliery, and has been operating it for a number of years, but now that the new combination has been formed, which threatens to some extent the business of the Pittsburg combine in the Southern markets, it is reasonable to assume that the move is to protect the Pittsburg interests against encroachment by a company having large properties nearly a thousand miles nearer the Southern markets, having a river outlet and fleets to transport the product. However, the North American Company, which operates under the name of the West Kentucky Coal Co., has to supply its own gas and traction plants in St. Louis and elsewhere, which will consume about 1,500,000 tons yearly, and it will for some years to come probably not be able to threaten the Pittsburg interests in the open market, but in securing territory contiguous to the North American's tracts here the big combine may be providing against future contingencies.

Tradewater river when locked and dammed will give similar storage pools as the tributaries do near Pittsburg, and it is but four or five miles from Sturgis to the Ohio. The fleets would not have to contend against as much of the "bad river" which the large tows from Pittsburg are exposed to, and the distance being greatly lessened, smaller fleets could be profitably utilized.

The Pittsburg interests are said to have requested a sale price on the property of the Bell Coal & Mining Co.'s tracts and colliery on the Tradewater, owned by Col. W. W. Smith and others. This company is exploiting the Bell vein, which is from four feet to five feet, and in quality the superior seam of the lower coal measures. The Bell tracts were developed by John Bell of Tennessee, a famous ante-bellum statesman, who with prophetic vision foresaw the wonderful opportunities now being grasped by the succeeding generation. The old miners' shaft, abandoned since the Civil War, with its huge stone furnace stack, remains as a fitting monument to the distinguished pioneer. Col. W. W. Smith, another Tennessean, took up the work where John Bell left off, but under more favorable circumstances as regards means of transportation, having now the Illinois Central Railroad, besides an outlet by river.

The United States Coal Co.'s plant, now a part of the North American, also reaches the Ohio by rail, having a tippie near the mouth of the Tradewater. The coal measures in this section have been worked profitably for nearly half a century, but not until recently has foreign capital become interested. Coal rights were formerly bought at \$3 to \$5 the acre, but prices have risen steadily to \$8, \$10 and \$20 the acre. A farmer near Sturgis the other day refused to part with his coal equity for less than \$100 an acre.

The various seams forming the bituminous lower measures are Nos. 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1. Of these, Nos. 11, 9, 7, 6, 2, or Bell, are the only dependable coals of sufficient thickness to be mined profitably. Nos. 6 and 7, four feet and three feet, were worked principally by the O. V. Mining Co. or old Shotwell Company

from a time antedating the war, and the old Carlin colliery was shut down during the war, the river fleets having been seized by the federals. Within the past year the old works have been reopened and a modern plant established by a Pennsylvania company. It is highly probable that a notable feature of the North American's development will be the locking and damming of Tradewater, by which the inestimable riches of this coal field may be transported in barges at the very minimum of cost. It is estimated that coal can be delivered at Memphis at a cost of about eight cents, whereas the rail rate is \$1.25 per ton. Hence the river outlet is the great sine qua non, and the Bell coal will challenge competition as to quality with the Pittsburg product. It has no superior for gas, coking or domestic purposes, being almost free of sulphur and high in pure carbon. The No. 9 vein has been principally worked heretofore in this immediate field, and probably ranks next to Bell as to quality. The coal traffic is so heavy on this division of the Illinois Central that two special coal trains are necessary to clear the yards and carry the product South.

The North American will equip the local plants with electric haulage, work on which had begun in the Tradewater shaft before they purchased the several collieries.

At present the largest single producer in this coal section of Kentucky is the St. Bernard Mining Co. at Earlington, Hopkins county, having an annual capacity of 1,500,000 tons, situated in the center part of about 35,000 acres of workable coal, which is taken out at eight separate mines.

One peculiarity of the coal field in this (Union) county is the marked fertility of the soil above. It is all "pay dirt," whether the implement be pick or plow, and the balance of trade is always in its favor: in fact, for general farming purposes, not to mention the coal, it is unexcelled even by the famed bluegrass country.

H. L. MOSGROVE.

A \$50,000 Glass Plant.

Another important industry that will be established at Keyser, W. Va., is a glass plant to be erected and operated by the Keyser Glass Co., now perfecting its organization with a capital stock of \$50,000. F. B. Bannister of Morgantown, W. Va., represents the principals in this enterprise. He has announced that the plant will be built at once, to include modern structures and equipment for the manufacture of glass tumblers and other glassware of that character. About five acres of land will be used. The main building or blowing-room will be 80 feet square, the tempering-room 50x75 feet, the assembling-room 50x150 feet, all of brick and iron; cooperage shop 40x60 feet, hay and storage shed, mixing-room 25x50 feet, and an office building. It is stated that the plant will employ about 150 men and have a pay-roll of from \$12,000 to \$15,000 monthly.

Capital Wanted.

The Clarksburg Industrial Co. of Clarksburg, W. Va., writes the MANUFACTURERS' RECORD as follows:

"Your active interest in the promotion of the industrial activity of this State, as well as of the whole South, leads me to proffer this inquiry. The city of Clarksburg and Harrison county could use capital to use used in real-estate loans, the basis of which would be as safe and conservative as the most conservative could wish. Our West Virginia is at the present time using large capital for the development of its industrial enterprises, and as a consequence very little of home capital is going into investment in real-estate loans. Could you, from your knowl-

edge of Eastern loan companies, refer us to such as would consider this matter and make necessary investigation which might lead them to make loans in this State on first-class real-estate security?"

SOUTH'S LABOR PROBLEM.

Additional Light Thrown Upon the Difficulties of the Situation.

To the interesting and valuable discussion, elaborated in last week's issue of the MANUFACTURERS' RECORD, have been added the following letters throwing more light upon the difficulties of the situation:

Inclined to Foreign Immigrants.

E. T. Schuler, president Alabama Steel & Wire Co., Gadsden, Ala.:

We have had extensive experience with negro labor, and find as opportunities for work and pay increase the negro becomes less reliable and steady, being contented with two or three days' work per week, and is therefore rapidly retrograding in reliability and efficiency.

There has been a marked scarcity of labor for the past six months. There seems to be enough around, but simply not working steadily. The only remedy for the class of labor required by the manufacturing industries of the South, as well as the farming communities, is to divert through our Southern ports a portion of the tide of immigrants pouring into this country. This can only be done by starting in on the other side, for the destination of the emigrants is invariably arranged before they leave the old country. It is wrong in principle to undertake to induce laborers from Illinois, Indiana, Ohio and Pennsylvania, the most prosperous section on the face of the earth, to move South to a country, for the present at least, less prosperous, with new conditions and new surroundings. Before becoming acclimated a man from the North must usually go through a short period of illness, account of change of water, for which he blames the country, and invariably leaves as soon as he can get away, and before leaving writes back, and after returning finds all manner of fault with the country, this preventing others from coming if they were disposed to.

According to our opinion, the only way of improving the character of the negro as a workman is to lower his wages, so that he must work six days in a week in order to live, and provide adequate punishment for him. At the present time the laws do not provide anything that is a real punishment for a negro.

To increase the supply of white workmen through immigration it is necessary that united and intelligent action be taken. They must be directed to this part of the country through our Southern ports, and only in such numbers as can be provided with assured steady work and protected from the competition of the negro. The average white citizen of the South will employ a negro two or three days in a week, which is too often satisfactory to both parties, whereas the white man requires work six days in a week through the greater part of the year at least. A negro man will work part of one week and a negro woman cook in some white family will support him for the next two. The white man cannot live in this way, and must be protected against that kind of a competition. If the white immigrants are directed to this part of the country in reasonable numbers that can be provided with steady work they are too far away from home to get homesick. They do not know about any better conditions in the North, and conditions here are better than where they lived; hence they are satisfied.

Most of the Italians that come to the South are from lower Italy and Sicily, and are a very inferior class of labor.

Those from Northern Italy make good labor in most places they are put. Around the furnaces and manufacturing plants Hungarians, Poles, Austrians and Russians make the best labor. Swedes and Norwegians are not so easily satisfied with the climate, preferring a Northern State, where the climate is near what they have been used to. We desire to add a word regarding the education of the negro. That the negroes, as a class, as they exist today are worse off and inferior in every way to the old slave negro can be determined to the satisfaction of anybody by investigating and comparing the negro as he is today and the old slave negro, of whom there are not a great many left; also by consultation with old families who are familiar with the negro during those periods, and whose statements can be relied on. That the negro is incapable of profiting, as a class, by education is amply proven by the fact that they have been living very closely with the white people of the South for a number of generations, and are no different and no better off today than they were generations ago. If they were capable of an education and civilization during this long period of association with white people, they certainly would have absorbed some of both. No further evidence, no further experimenting is necessary. A negro's idea of education is that it relieves him from the necessity of work; it is, therefore, actually detrimental to his own interests. We are speaking of the negroes as a class, and do not refer to particular individuals, because the former is the way we have to deal with them.

Seeking Italians.

J. K. Merrin, secretary and treasurer Tampa Foundry & Machine Co., Tampa, Fla.:

Our experience and observation justify us in saying that the quotation you publish from Mr. Porter Warner of the Howard Hydraulic Cement Co., Cement, Ga., expresses our views exactly.

We can usually get all the labor we want, including negro labor.

We regard "the increase in the supply of white labor through immigration" as very desirable for this country.

We are now taking steps to secure Italians to take the place of negro labor in the work to be done by ordinary day labor. We learn from those who have tried them that they are apt to learn, sober and industrious.

Wage Reduction as a Remedy.

J. M. Barr, president Seaboard Air Line Railway, Portsmouth, Va.:

We are large employers of negro labor, as are all railroads in the South. It is less efficient now than formerly, because of the high wages paid and the demand for labor being in excess of the supply.

We are short of common labor throughout the length of our line on account of large demand therefor. The negro is so constituted by nature that when he has earned sufficient money to satisfy his customary physical needs he ceases work and does not return thereto until his necessities compel him so to do. The remedy for this condition is either a reduction in wages or importation of other labor, both of which appear to be impossible of immediate application.

Economically the best and only way, in my opinion, to increase the efficiency of negro labor is to reduce its wages. The average Southern negro will not work so long as he has money in his pocket.

Apparently the only practical way of reducing the wages of negro labor is to secure other labor, inasmuch as wages will be high when the demand for labor exceeds the supply. To do this it is necessary to import common labor, and all efforts so to do should receive the hearty support of

all employers of such labor in the South. The fact that white and black labor will not work amicably together makes the present situation difficult of satisfactory solution.

The Question of a Commissary.

H. M. Graham, president and general manager Stuart Lumber Co., Brinson, Ga.:

We have always found the negro the best laborer we could get in this section, especially for outside work. We further find that it is necessary to keep a number of extra men around the plant, as there are times when some of them will lay off, but when it is necessary we find we can make the negro work when no one else will work.

We always have ample supply of workmen. We believe it is due to the simple fact that we do not run a commissary in connection with our saw-mill plant. We agree to pay a man so much, and pay him that, and let him trade where he sees fit. We ran a commissary in connection with the plant for two years, and we found that while we sold the negro just as cheap as anyone, he had an idea that we were taking advantage of him, and with that idea in his mind he would get even with us somehow.

We do not think that there is any way of improving the character of the negro, as 90 per cent. of them haven't any to start with, but we do think that there should be steps taken to induce good farmers to immigrate to this section of the country, as we fully believe a farmer can earn more on his investment than in any other part of the United States.

We would be very much opposed to working Italians, as from what we have seen of them in the North in the various lumber yards we believe they are worse than the negroes. However, we do think that the worst class of Italians are employed in the lumber yards around Chicago, and those are the kind we do not want in the South. As we have said before, we have all the labor that is necessary, and will say we believe the negro will do all the work necessary if you will only make him do it.

Vacillating in Desire for Work.

R. L. Coleman, New Birmingham, Texas:

Our iron works have been idle for so long a time, and as the only other manufacturing enterprise with which I am connected employs only white men, my experience with negro labor is exceedingly limited. It seems to be a rather general complaint in this section, however, that the negro's desire for work is very "vacillating," and depends very frequently on whether he has a few dollars ahead or not. I understand that several employers find it convenient, on this account, to establish the monthly pay-roll, thus preventing a weekly lay-off of some of their hands.

INDUSTRIAL MODEL TOWN.

What Has Been Done at Sparrows Point by the Maryland Steel Co.

In a paper before the welfare department of the National Civic Federation, read this week at Atlantic City by Mr. R. K. Wood of the Maryland Steel Co., descriptive of the origin and growth of the community near the plant, he said:

"Streets were laid out with intermediate alleys 60 feet wide crossing each other at right angles. Shade trees were planted, artesian wells were bored and a settlement of sanitary regulations and inspection was adopted. The sale of spirituous liquor was forbidden by law within a radius of two miles of any public school.

"In opening public schools the co-operation of the county school authorities was enlisted, the company providing the school-houses rent free, the county furnishing the teachers. The per cent. of children at-

tending the school above 12 years diminishes rapidly among industrial communities; it was, therefore, essential to secure wise teaching of the youngest pupils and to enforce attendance. The company made the rule arbitrary that the children of its employees must attend school, enforcing this regularly by dismissal when necessary. Foremen are not allowed to employ boys under 14, except in rare instances, for the help of a disabled father or widowed mother.

"The first public kindergarten in the South was opened at Sparrows Point in 1892. Its success was such that others have been established in Baltimore. Its direct effect upon the children has been most salutary, while indirectly the kindergarten has exerted an uplifting influence upon the parents and older children, and more than one home of intemperance and dissipation has been reclaimed.

"Eight hundred children attend the public schools under the guidance of 24 teachers. Manual training and cooking schools have been in successful operation for several years. The new schoolhouses are modern buildings with the most improved heating, ventilating and sanitary apparatus.

"There are now about 850 dwellings at Sparrows Point. These are of various types of frame and brick, from six-room houses for laborers at \$5 per month to nine-room dwellings, with baths, for mechanics at \$10; also a few cottages for clerks and heads of departments, from \$15 to \$30. A house of 12 rooms and bath rents for \$25; of 10 rooms and bath for \$19; of eight rooms and bath for \$16. So contented were the employees with their homes that when depression caused the works to close temporarily many skilled mechanics remained, working at manual labor until the return of better times.

"The county government leaves the direct administration of civic affairs to the steel company, which pays for all local expenses, police and fire departments, care and lighting of streets, water supply and sanitation. The latter includes thorough inspection and removal of all refuse from yards and alleys and a thorough system of underground sewerage. A moderate return of interest upon capital invested in the township is all that the company expects.

"A general department store sells all supplies at reduced prices. The residents, however, can trade where they please. The store company also carries on a large farm, which furnishes fresh vegetables and fruit, a model sanitary dairy and creamery and improved abattoir with a cold-storage warehouse and a large bakery.

"Desirable lots were reserved for churches and parsonages, and their erection is encouraged. Rooms are provided for numerous societies and beneficial organizations among the employees. A large clubhouse contains reading and billiard rooms and an assembly room for concerts, lectures, dancing and other parties, an orchestra of local talent frequently furnishing music.

"Greenhouses heated by excellent steam provide palms and other decorative plants for church and other festivals, and distribute each spring thousands of bedding plants for the adornment of dooryards. Premiums are offered tenants for the most attractive arrangement of plants and shrubbery.

"Ample provision is made for all kinds of athletic sports, including boating and bathing. Several hundred acres of woodland bordering upon the river and creek form a natural park, with a grove for open-air entertainment.

"One-fourth of the population consists of colored people, who perform a large share of the labor. A creek separates their settlement from the main town.

Their comfortable houses are subject to the same care and regulations as those of the whites; they are orderly, industrious, self-respecting citizens, with no desire for social community with the whites, having their own churches and public schools, ranking well with those of their white neighbors.

"One-half of the white residents are native Americans and the others of various European nationalities, no one largely predominating.

"The company has been peculiarly exempt from labor troubles, employees being satisfied that the management is fairly considerate of their worth and personal needs, while free from a spirit of paternalism or patronage."

Iron and Steel Active.

The *Iron Age* of New York says in its weekly review:

"There has been an active movement in many branches of the iron and steel trades, and manufacturers are facing the future with increasing confidence.

"Apparently the buying in pig-iron is over for the present. It stopped rather abruptly in the East with the end of last week, and there is a breathing spell in the Cincinnati market. It is estimated that the total sales during the two weeks of lively purchasing will aggregate about 500,000 tons for the whole country, the great bulk of the business having been for delivery during the next 60 and 90 days. It has led Southern makers who had sold between the range of \$10.50 and \$11.25 to advance their prices to \$11.75 to \$12 for No. 2 at Birmingham, some of them holding for more. This has given the Northern and Eastern producers the chance to book considerable business at their old asking prices, at which they were marketing very little. In other words, the market is steady and firm after the rush of buying, instead of being weak and nominal, as it was before it.

"A number of railroads have bought steel rails during the last 10 days, the total figuring up close to 100,000 tons. Included in the purchases is from 25,000 to 30,000 tons for the Missouri Pacific system, 17,000 tons for the Spokane International, 12,000 tons for the Kansas City Southern, 6,000 tons for the St. Louis & Southwestern and 5,000 tons for the Somerset Railway. The fact that the mills have a heavy tonnage makes them indifferent to business in light rails unless prices are better, and the market in this branch is firmer at \$23 to \$25."

Acquired by Big Combine.

[Special Dispatch to Manufacturers' Record.] Sturgis, Ky., July 26.

The big combine known as the West Kentucky Coal Co. of New York has added to its other consolidations here the I. M. Wheatcroft plants, including town and railroad at Wheatcroft, Webster county, 1000 acres of the Rock Spring coal field, including a new shaft there and the Wheatcroft yards at New Orleans, at a price approximating \$300,000. This gives the big company 60,000 acres of coal lands in Union, Webster and Crittenden counties, five operating shafts and elevators at Cairo, Memphis and New Orleans, with a river fleet of transports. All the mines are to be electrically equipped.

H. L. MOSGROVE.

Buying Not as Keen.

[Special Dispatch to Manufacturers' Record.] Birmingham, Ala., July 26.

The buying of iron is not as keen as it was last week, but there is very fair demand on a basis of \$12 for No. 2 foundry. The majority of purchases run from 100 to 1000-ton lots. As a rule, deliveries are confined to 60 and 90 days' limit. There are good inquiries for delivery during the first quarter of 1906, but they are receiving little or no encouragement. The iron fraternity is satisfied with the situation. Sales of Sloss Company to date this month now aggregate 93,000 tons, and all, with few exceptions, for delivery within 90 days.

J. M. K.

The League of Georgia Municipalities will hold its annual session at Griffin, Ga., August 16-18. The league includes in its membership the mayors of Georgia's cities, and is doing effective work for civic improvement in the State.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Pomona Cotton Manufacturing Co.

Messrs. W. C. Bain, A. L. Bain, W. S. Thomson and Lee H. Battle of Greensboro, N. C.; A. F. Wing of Palmer, Mass.; J. E. Sirrine, J. F. Gallivan and D. J. Gallivan of Greenville, S. C., have incorporated the Pomona Cotton Manufacturing Co. of Greensboro, N. C., for the purpose of building a cotton mill. The company has a capital stock of \$250,000, and J. E. Sirrine will be the mill engineer-architect in charge of the plans and construction work. Contract for erecting the buildings will doubtless be awarded to the J. F. Gallivan Building Construction Co. of Greenville, S. C. No further details regarding the plant have been announced. Some months ago the MANUFACTURERS' RECORD referred to W. C. Bain as planning to build a cotton mill, and this new company is the outcome of his efforts. This new company has purchased the property of the Etowah Mills, which has been in course of construction at Greensboro for some months, and will continue the work to completion. As originally planned, this is to be a plant of 7500 mule spindles and 500 looms to begin with, and be doubled later on.

Directory of Textile Industries.

The 1905 edition of the Textile World Official Directory is now ready for distribution. This book is one of the most useful in its class, and for years its regular issuance has kept people interested in the textile industries informed as to the various mills, dealers and agents throughout the United States and Canada. The contents show the numerous textile establishments (cotton, woolen, silk, etc.), arranged by States and cities or towns where they are located, with full data about each mill, also maps of the manufacturing States, showing towns where there are mills. An alphabetical index of all the mills is also presented. The yarn-trade index, the classified list of commission and order mills, dyeing and finishing plants, the lists of dealers in raw materials and stock, agents and buyers of textile fabrics, buyers' index of textile machinery and supplies and various other information will also prove of value to those who consult the directory. The Lord & Nagle Company, 299 Devonshire street, Boston, Mass., is the publisher of the Textile World Directory.

The Perkins Knitting Mills.

The Perkins Knitting Mills of Columbus, Ga., is making rapid progress on the construction of the buildings for its plant, referred to at length in the MANUFACTURERS' RECORD of May 11. In previously mentioning this enterprise it was stated that the equipment is to be from 3000 to 4000 spindles for manufacturing yarns and 150 machines for knitting the yarns into hosiery. Further particulars are that the company's buildings will be five in number—main building 300x200 feet, dye plant 100x50 feet, boiler plant 50x50 feet, warehouse 100x200 feet, and a pumphouse. These buildings will cost from \$35,000 to \$45,000. J. E. Sirrine of Greenville, S. C., is the architect-engineer in charge, and the J. F. Gallivan Building Construction Co. of Greenville, S. C., is the contractor

in charge. The Perkins Knitting Mills has a capital stock of \$75,000, with privilege of increasing to \$300,000.

The Central Cotton Mills.

The Central Cotton Mills of Griffin, Ga., has applied for incorporation, and the company will have a capital stock of \$100,000, with privilege of increasing to \$500,000. A suitable two-story building has been secured, and in this will be placed an equipment of 125 looms to begin with for the production of high-grade cloth. Contract for the machinery has been awarded to the Lowell Machine Shops of Lowell, Mass. For the present the company will use a steam-power plant, but in the near future will arrange to use electric power, purchasing the electricity from the Towaliga Power & Light Co. The organizers of the Central Cotton Mills include Messrs. J. J. Mangham and Douglas Boyd, well-known mill men of Griffin; W. H. Newton, Allan Little, A. E. Fual and others.

Aldora Mills Reorganized.

In its issue of June 8 the MANUFACTURERS' RECORD mentioned the purchase of the Aldora Mills at Barnesville, Ga., by H. R. Robertson of Macon, Ga., and associates, and stated that they intended to reorganize the company and improve the plant. This reorganization has been effected, Mr. Robertson being elected president; J. L. Kennedy of Barnesville, vice-president and manager, and George W. Heard of Macon, secretary-treasurer. There are 9916 spindles in the mill, and to these will be added looms, so that cloth can be manufactured. The Draper Company of Hopedale, Mass., will furnish the looms. About 150 operatives will be required.

The Clayton Cotton Mills.

Steady progress is being made by the Clayton Cotton Mills of Clayton, N. C., on the construction of its additional mill. The MANUFACTURERS' RECORD of March 30 presented brief details regarding this enlargement. It was stated that the company had contracted for a 75x144-foot building and a 48x125-foot extension to the old structure, to accommodate the new equipment. This latter will include 5120 spindles and complementary apparatus. It will double the Clayton plant and its production of yarns. It is understood that from \$75,000 to \$90,000 is being invested in the betterments.

Sale of Southern Mills.

The property of the Southern Textile Co. of 27 William street, New York, was offered at public auction on July 25 by the trustee in bankruptcy. Its three mills were bid in separately by various parties, and then being offered as a whole a higher bid was obtained and the properties were sold to the International Trust Co. of Maryland, Baltimore, Md., at \$110,500. This sale is subject to the confirmation of the United States Court. The three mills are the Windsor Mills at Burlington, N. C.; the Chicora Mills at Rock Hill, S. C., and the Moorhead Mills at Moorhead, Miss.

Cotton-Mill Capital Wanted.

The merchants and farmers of Oconee county, Georgia, have subscribed \$50,000 towards the organization of a company to build a cotton mill. They propose incorporating with a capital stock of \$100,000, and invite investors to subscribe the \$50,000 remaining. Oconee is one of the best cotton-ginning counties in the State, and a suitable site for the plant has been chosen at Watkinsville. Messrs. N. W. Ashford & Sons of Watkinsville, Ga., can be addressed for information regarding this proposition.

The Rockwood Mills.

The Rockwood Mills of Rockwood, Tenn., has been incorporated, with capital stock of \$40,000, and will establish the plant recently reported as proposed. This company will erect a building 150x250 feet in size, to accommodate 200 knitting machines, but this equipment will not be installed to start with. Its capital stock has been subscribed, and construction work is expected to begin at once. Messrs. W. E. McElwee, S. B. Leiper, J. A. Erwin, J. E. Fox and T. A. Wright are the incorporators.

The Middleburg Mills.

The management of the Middleburg Mills of Batesburg, S. C., having decided to enlarge that plant, a contract has been awarded for 4000 spindles additional. This addition will increase the equipment to about 10,000 spindles, and there are also 300 broad looms in position. The company has completed the dyehouse which it has been erecting for several months, about \$6000 having been the cost of this improvement. The new machinery is now arriving and being put in position.

Leased the Banner Mill.

The Banner Cotton Mills at Goldville, N. C., has been leased to Messrs. R. L. Graham and C. E. Graham of Greenville, S. C., operators of cotton mills in that city. The Messrs. Graham will assume control of the plant on August 1 and will add 2500 spindles to the present equipment of 5000 spindles. Contract for the new machinery has been awarded, and it will be received soon. Probably about \$25,000 will be expended for the betterments.

New Knitting Mill.

The Georgia Manufacturing Co. of Columbus, Ga., has purchased site upon which to erect a building for its knitting plant. This new structure will be two stories high, 46x140 feet, and into it will be removed the company's present equipment of 2500 spindles and 153 knitting machines, and some more machinery will be purchased. The buildings the company occupies will then be used for dyehouse and warehouse.

Textile Notes.

The Sanford (N. C.) Cotton Mills has declared a semiannual dividend of 3 per cent.

The Cowpens (S. C.) Manufacturing Co. has declared its usual semiannual dividend of 3½ per cent.

The Business League of Aberdeen, Miss., is negotiating with manufacturers relative to the establishment of a cotton-robe mill in Aberdeen.

It is reported that Leroy Springs of Chester, S. C., contemplates building a million-dollar cotton mill at Cheraw. He is president of a \$100,000 and a \$150,000 mill company in his city.

The Board of Trade, Pine Bluff, Ark., states that Messrs. Lutes & Lutes of Philadelphia, Pa., are the Northern capitalists its secretary is negotiating with relative to building a cotton mill in Pine Bluff.

It is proposed to organize a stock company at Florence, S. C., for the purpose of building a cotton mill. Messrs. J. L. Barringer, J. M. Timmons, H. S. Rose and several others have been appointed a committee to solicit subscriptions to the capital stock.

The Crescent Manufacturing Co. of Spartanburg, S. C., will add from 50 to 100 knitting machines to its knitting mill, present equipment being 50 knitters and complement of sewing machines, etc. Probably the dyehouse and pressing-room will be improved.

It is reported that Messrs. W. A. Mauney of Kings Mountain, N. C., and J. M.

Torrence of Morganton, N. C., are planning the organization of a stock company to build a cotton factory on Green river. Their plans are said to include the development of the water-power on Green river and the erection of an electric plant to transmit power to the proposed mill.

It is stated that Joseph H. Thompson, representing capitalists who include W. R. Odell of Concord, N. C., is negotiating for the cotton-mill property of the Tennessee Manufacturing Co. at Nashville, Tenn. George Goodwin is now operating the plant, and it is understood that the prospective purchasers contemplate taking possession later and modernizing the equipment.

The committee of the American Cotton Manufacturers' Association which conferred this week with Secretary Wilson of the Department of Agriculture regarding the cotton-crop reports consists of Messrs. R. M. Miller, Jr., chairman, president of the American Cotton Manufacturers' Association, Charlotte; T. I. Hickman, president Graniteville Manufacturing Co., Augusta, Ga.; Geo. B. Hiss, president Rhodhiss Manufacturing Co., Charlotte; T. A. Blythe, president Lincoln Manufacturing Co., Philadelphia; S. B. Tanner, president Henrietta Mills, Henrietta; J. W. Cannon, president Cannon Manufacturing Co., Concord, and C. B. Bryant, secretary American Cotton Manufacturers' Association, Charlotte.

The Commonwealth of Man. A series of discourses by Robert Afton Holland, S. T. D. Publishers, G. P. Putnam Sons, New York and London. Price \$1.50.

The substance of these discourses was given as the Slocum lectures to the students of the University of Michigan in 1894. The author was prevented by long continued invalidism from preparing his manuscript for immediate publication under the terms of the lectureship. The matter stood thus until the appearance of Markham's poem, "The Man With the Hoe," induced Dr. Holland to undertake a course of sermons on the fallacies which that poem embodied. The sermons were printed in a St. Louis daily paper as they were preached, and were in revised form accepted in place of the lectures in which similar thoughts had been set forth in more academic form. To them, for this volume, have been added a sermon preached during the Spanish-American War to the Sons of the Revolution, and an address delivered to the national convention of the Brotherhood of St. Andrew, the additions being of the same strain as the sermons. Their character is indicated in the titles of the eleven chapters: "The Man With the Hoe," "Progress by Property," "Brother to the Ox," "The Ideal Man," "The Reign of the Plutocrat," "The Handiwork of the State," "The Future of Society," "The Angelus; or, Man's Reply to God," "The Wages of Going On," "The Sword of the Lord" and "The Red Cross." The whole is a vigorous protest against a socialism as full of the credulity and enthusiasm as many another cult, which reasons with its wishes, substitutes sentiment for conscience and promises an earthly heaven to every form of discontent. Analyzing carefully and in detail the sentiments of "The Man With the Hoe," which he calls the Marseillaise of the Labor Union, the battle hymn of a new religion, Dr. Holland makes a timely and strenuous argument in behalf of individual rights, private property and the institutions which have long guaranteed them, but which socialism would utterly destroy. He advances to some points beyond the willing travel of other thinkers, but the advance is, perhaps, justified as a contrast to the return to the clod that socialism would induce. The total effect of the book can be nothing but healthy.

COTTONSEED

Cotton-Oil Refining.

Much has been written on the subject of cotton-oil refining, and substantial progress has been made in refining methods in the United States during the past 20 years. Crude cotton oil, as it runs from the press and according to the character of the seed and mode of treatment, varies in color from a deep port wine to a dark shade, nearly black. A very dark-colored oil is the result of prolonged and high temperature in the heater. Damp seed, however, slightly heated when in storage, will produce a correspondingly dark-oil yield.

The crude oil tanked soon after being made contains a large percentage of mucilaginous and mealy matter. At this point, before being pumped into storage tanks, the system of filtering should be carefully carried out, rendering, as it does, the subsequent refining operations more susceptible of accomplishment.

As a preliminary step to filtration, a simple but very effective treatment given the crude oil just as it leaves the press, and for the first time put into successful operation by the writer about eight years ago, at once removes automatically the heavy muddy material always present in fresh crude oil, leaving a comparatively clear product which can be readily and thoroughly clarified by the filter press. The system referred to consists of a triangular-shaped tank suspended beneath and behind the hydraulic press or presses. The clarifying tank for, say, four hydraulic presses should be of about 100 gallons capacity and gradually decreasing in width to a point at extreme bottom end, forming an opening in which a two-inch plug cock must be set in. A valve or plug cock lesser than the size mentioned would not permit the mealy matter to pass through, with the result that the aperture would be clogged and much trouble entailed in the operation of the device. Its method of work is as follows: The crude oil from the presses runs by gravity into the funnel-shaped arrangement suspended in the clarifying tank, while the clear oil ascends outside the funnel until it reaches the overflow. By this means the filter press is saved much work and the operation of filtration carried on with comparative ease. The heavy mealy slush assumes compact form at the bottom of the clarifying tank, and once every half-day, or half-watch, a laborer with a pail proceeds to the clarifying tanks and removes the slush by simply opening the two-inch plug cock. The moment clear oil begins to come the cock is closed. This important oil-mill operation will under foregoing conditions run from season to season without a hitch, and it will be found a labor-saver, inasmuch as tank-cleaning, always a sloppy and laborious work, is dispensed with. Many linseed-oil mills are fitted up with this equipment, and although at a convention of oil-mill superintendents held in Houston, Texas, a number of years ago, to which the writer was invited, I described the clarifying tank, there are but few cotton-oil mills having the system in operation.

Caustic-soda lyes of various strengths are used in refining, according to the nature and condition of the oil to be treated. The object in refining is, in the main, to remove free fatty acids, resinous matter and coloring substance, technically known as "Gossypin." The proportion of these in a crude oil varies metrically, according to the character of the seed and press-room treatment, the fatty acids alone in an inferior grade of oil running as high as from 7 to 9 per cent.

The elimination of these objectionable

substances causes corresponding shrinkage in the refined oil, which, together with the general expense involved in refining, explains the difference in prices of the crude and refined products.

Proceedings of the American Forest Congress. Publishers, H. M. Suter Publishing Co., Washington, D. C. Price \$1.25.

Bearing upon a subject attracting greater attention every year in this country is the volume "Proceedings of the American Forest Congress," embodying the addresses made and the papers read at the gathering last January at Washington, D. C., under the auspices of the American Forestry Association. The congress was for the purpose of bringing about a broader understanding of the forest in this country in relation to the great industries depending upon it, of inducing an economic handling of the forest, and of stimulating and organizing all efforts to make the forests of the country a permanent source of wealth.

The gathering was attended by enthusiastic and practical men from many parts of the country, and its proceedings included general addresses by President Roosevelt, Secretary James Wilson of the Department of Agriculture, Ambassador J. J. Jusserand from France, Vice-Chancellor B. L. Wiggins of the University of the South, Congressman John Lamb of Virginia and President Howard Elliott of the Northern Pacific Railroad.

The special topics were discussed as follows: "Importance of the Public Forest Lands to Irrigation," by Guy E. Mitchell, F. H. Newell, J. B. Lippincott, Morris Bien and Arthur P. Davis; "The Lumber Industry and the Forests," by N. W. McLeod, J. E. Defebaugh, John L. Kaul, Victor H. Beckman, F. E. Weyerhaeuser, M. C. Moore, John A. Dix, Col. George P. Emerson, James T. Barber, George K. Smith, Capt. George P. Ahern, George W. Hotchkiss and John A. McCann; "Importance of the Public Forest Lands to Grazing," by A. F. Potter, E. S. Gosney, Fred. P. Johnson, Francis E. Warren and Prof. L. H. Pammel; "Railroads in Relation to the Forest," by Charles F. Manderson, Joseph T. Richards, L. E. Johnson, Herman von Schrenk and President James J. Hill, Great Northern Railway; "Importance of Public Forest Lands to Mining," by A. L. Fellows, Seth Bullock, T. J. Grier, F. A. Fenn and George H. Maxwell; "National and State Forest Policy," by Overton W. Price, Charles D. Walcott, W. A. Richards, Gifford Pinchot, and Dr. J. T. Rothrock. Impromptu addresses were made by John Lacey, member of Congress from Iowa; W. A. Reeder, member of Congress from Kansas; Edward Everett Hale, chaplain United States Senate; Wm. S. Harvey, vice-president Pennsylvania Forestry Association; Aubrey White, commissioner of Crown Lands, Ontario; Dr. B. E. Fernow, author of "Economics of Forestry;" Mrs. L. P. Williams, chairman forestry committee, General Federation of Women's Clubs; Filibert Roth, professor of forestry, University of Michigan; C. A. Schenck, director Biltmore Forest School; Rutherford P. Hayes, president Appalachian Forest Reserve Association; Elihu Stewart, superintendent forestry branch, Department of the Interior, Ottawa, Canada; G. O. Shields, president League of American Sportsmen; Charles L. Pack; H. M. Wilson, United States Geological Survey; Prof. J. W. Toumey, Yale Forest School; R. H. Campbell, secretary Canadian Forestry Association, and Dr. David T. Day, United States Geological Survey.

The Dallas Cotton Mills and the Morwebb Cotton Mill, both of Dallas, N. C., have each declared a semiannual dividend of 4 per cent.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW RAILROADS.

Eight Companies Reported to Build Several Hundred Miles.

A number of new railway projects have been reported during the past week, including the following:

The Bucks Creek & Catawba River Railway Co. of Durham, N. C., to build a line about 100 miles long from a point in McDowell county eight miles from the mouth of Bucks creek, running down the valley to the Catawba river, along the latter to its north fork, up that valley to the North Toe river, and thence along the latter to the State line, thus passing through McDowell, Mitchell and Yancey counties. The stockholders and directors are C. Boice, Abingdon, Va.; George W. Edwards, Winston-Salem; J. Crawford Biggs, Durham; Leo D. Heart, William B. Jones and Samuel J. Hinsdale, Raleigh, N. C.; capital \$500,000.

The North Carolina & Ohio Railroad has been organized to build a standard-gauge line from a point in the center of North Carolina to the seacoast via Little Washington, Raleigh, Wilson and Greenville. The directors are Col. C. O. Haines and Adam Treadwell of Norfolk, Va.; John S. Cunningham, Stephen C. Bragaw, Larry J. Moore, C. N. Brown and William Bragaw of North Carolina.

The Live Oak & Perry Railway Co. has been organized to build 165 miles of railroad from Jacksonville to St. Marks, Fla., passing through Duval, Baker, Columbia, Suwannee, Lafayette, Taylor, Jefferson and Wakulla counties; capital \$2,000,000. The officers are Thomas Dowling, president; R. L. Dowling, first vice-president; F. M. Dowling, treasurer; A. G. Patterson, second vice-president; O. D. McFarland, secretary.

The Englewood, Alexandria & Southwestern Railroad Co. has filed its charter in Louisiana to build a road from Englewood, in Madison parish, southwest through Tensas, Franklin, Catahoula and Rapides parishes to Alexandria, about 100 miles. The charter gives the right to extend from Alexandria south and to construct branch lines; capital \$1,000,000. The officers are George Engel, president; Fred J. Metz, vice-president; Frank Hadden, second vice-president; George P. Hummer, secretary and treasurer; Herman Engel, general manager; Edson Wilcox, superintendent; directors, George Engel, Frank Hadden, Herman Engel, Edson Wilcox and Jeff Snyder.

The Arkansas Southeastern Railroad Co. has been chartered in Arkansas to build the proposed extension of the St. Louis & North Arkansas Railroad from Leslie, Ark., to Lonoke, Ark., with a branch from a point near Lonoke to Little Rock, a total distance of about 141 miles. The officers are George L. Sands, president; John Scullin, vice-president; W. B. Smith, secretary; C. L. Gilbert, treasurer; directors, David R. Francis, John Scullin and George L. Sands of St. Louis, S. W. Reyburn, Charles F. Penzel, E. G. Thompson and W. B. Smith of Little Rock.

The Oklahoma City Terminal Association has been chartered to build a standard-gauge railway at Oklahoma City, O. T.; capital \$150,000. The incorporators are T. D. Turner, J. H. Wheeler, I. L. Wilkin, W. W. Bierce, R. J. Edwards, J. M. Owen, A. H. Classen, J. H. Johnson, John W. Shartel, G. B. Stone, George G. Sohlberg.

The Oklahoma Electric Railway Co. of Tecumseh, O. T., to build 10 miles of line from Tecumseh to Shawnee, O. T.; capi-

tal \$250,000. The incorporators are Alfred Hare, E. H. Milburn, E. T. Fullerton, E. J. Dickerson and Charles Blickenderfer.

The Winston-Salem Power Co. has been chartered at Winston-Salem, N. C., to operate a street railway, besides to furnish electricity for light and power; capital \$125,000. The incorporators are H. E. Fries, F. H. Fries, C. B. Watson and Clement Manly, all of Winston-Salem.

ON TO KEY WEST.

Florida East Coast Railway Preparing to Build Along the Island.

The Florida East Coast Railway Co. is making active preparations to build its Key West extension, an advertisement appearing in this issue of the MANUFACTURERS' RECORD stating that sealed bids will be received until 3 P. M. September 9 at the office of J. C. Meredith, consulting engineer, Miami, Fla., for the construction of reinforced concrete arch work, of which there will be 45,000 cubic yards at Knight's Key channel, a similar amount at Moser channel and 35,000 cubic yards at Bahia Honba.

Last year the railroad company completed an extension of 28 miles southward from Miami, Fla., to Homestead, Fla., and the Key West extension will be a continuation of this road, going from the mainland first to Key Largo and thence following the keys or islands to Key West, a distance of about 136 miles from Homestead. The company is reported to have begun the work of extending from Homestead, and is also said to be preparing for the construction of a connection between the mainland and Key Largo.

As heretofore described, the extension to Key West will be built on the coral rock of the islands, and also on bridges spanning the water intervals. The longest bridge will be about seven miles long, and although the proposed line would appear to be endangered by storms, the coral reefs which run outside of the islands on the ocean side will, it is said, protect it sufficiently from the waves. The first channel of any magnitude to cross is at Knight's Key, with a depth of 13 feet, and there is another farther on from 20 to 25 feet. At such points drawbridges will be provided to permit the passage of vessels.

The concrete arch work will be in spans of 50 feet, reinforced with steel, and at these points over the water the roadbed will be 25 or 30 feet above tide, so that there will be little or no danger of damage to the track or trains by the waves. As for the other portions of the line, some of the coral keys are very long, and will afford a very substantial foundation for the track.

At Key West the company will establish adequate terminals, its final purpose, it is understood, being to build a number of large piers 200 feet wide and 800 feet long, protected by sheds and with basins of equal width between the piers. A drydock will also be provided. Because it is anticipated that from Key West will be conducted a heavy business to and from Cuba and the Panama canal, the terminals are expected to be of unusual capacity. There may in time be a dozen piers of the dimensions named, with a capacity of about 50 large ships.

When it was first proposed to build south of Miami, opening up the new orange-growing country in Dade county, it was intended to carry the line to Cape Sable, about 75 or 80 miles, but subsequent surveys disclosed the fact that it was practicable to reach Key West with a railroad, although hitherto the engineering difficulties in the way of such a feat seemed insurmountable. But while the line has been diverted, it is possible and perhaps probable that a branch or other extension

may be made towards Cape Sable to develop new fruit-growing regions, although as yet there is no announced intention on the part of the company to do such work.

IOWA TO ARKANSAS.

Plans of the Mississippi Valley & Gulf Railway Co.

Mr. Elmer L. Gochanour, secretary and treasurer of the Mississippi Valley & Gulf Railway Co., 939 First National Bank Building, Chicago, Ill., writes to the MANUFACTURERS' RECORD that the company was incorporated in Oklahoma for \$50,000,000 with a perpetual charter. Continuing, he says:

"The length of our line will be about 500 miles from a place in Southeastern Iowa to central Arkansas. Our exact terminals have not as yet been decided upon, but they will probably be located in the next few weeks. It is probable that Fort Madison, Iowa, and Little Rock, Ark., will be selected. Our connections will likely be with following roads: Santa Fe; Toledo, Peoria & Western; Burlington; Missouri, Kansas & Texas; Wabash; Alton; Missouri Pacific; Rock Island; Frisco; Cotton Belt and Iron Mountain.

"The northern one-third of our line will traverse a very desirable agricultural section, and the rest will be through a rich mineral and timber country, and we will not at any point enter into serious competition with existing lines, but will develop an entirely new field.

"Construction will probably begin at or near Shelbina, Mo., within a few weeks; contracts for grading and materials are now being closed. We are in the market for all kinds of material and supplies necessary for the construction, operation or management of a first-class railway. Proposals should be addressed to superintendent of construction, Mississippi Valley & Gulf Railway, Shelbina, Mo.

"Our present officials are J. H. Osborne, president, 1925-30 Unity Building, Chicago; W. I. Allen, first vice-president and general manager, 301 Home Insurance Building, Chicago; Theo. Rockenfeller, second vice-president, 939 First National Bank Building, Chicago, and Elmer L. Gochanour, secretary and treasurer, Shelbina, Mo., or 939 First National Bank Building, Chicago."

Webb City Northern Plans.

President A. H. Rogers of the Southwest Missouri Electric Railway Co. writes from Webb City, Mo., to the MANUFACTURERS' RECORD as follows:

"People largely interested in the Southwest Missouri Railway have organized the Webb City Northern Electric Railroad Co., with a capitalization of \$200,000.

This company will build a line from Webb City to Oronogo, Purcell and Alba, in all about 10 miles, which will serve as a branch of the parent company. J. B. Hodgdon is chief engineer.

"We are already receiving bids and letting contracts for bridges, grading, materials, etc.

"Oronogo is a mining town of about 2500 people. Purcell and Alba are two towns located in the newly-developed mining district north of Oronogo, with a population of 2000, and are growing rapidly.

"The new line will be constructed with easy grades, 70-pound rails will be laid, all bridges will be of steel and concrete, and there will be built a viaduct over the Frisco Railroad tracks at Oronogo Junction, which also will be built of concrete and steel."

Important Revision of Line.

The Baltimore & Ohio Railroad Co. has awarded to Thomas A. Shoemaker & Co. of Pittsburg, Pa., a contract for building a little more than three miles of double track, which will be a revision of line on

the Baltimore & Ohio Railroad between Hollofields and Alberton, a short distance west of Ellicott City, Md. The value of the contract is from \$600,000 to \$700,000, and construction will begin immediately. This improvement will eliminate 542 degrees of central angle and reduce the maximum curve from 12 degrees to 7 degrees, shortening the distance nearly two-thirds of a mile and reducing the maximum grade westbound from .9 per cent. to .5 per cent. It will place the roadway well above high water and free from damage by freshets, which heretofore have occurred almost every year. It will be an addition to the improvement of the old main line, which has been in progress for several years between Relay and Washington Junction. It will require two tunnels, one of 1000 feet and another of 500 feet. Several reverse curves will be eliminated by the change.

"Orient's" Progress in Texas.

According to a dispatch from Austin, Texas, the Kansas City, Mexico & Orient Railway Co. expects to complete its line through that State within two years. It is also said that the company will not immediately build its own line all the way across Texas, but will use the track of the Texas & Pacific Railway from Sweetwater, Texas, to Pecos, Texas, about 225 miles. This arrangement, it is said, has been made as a result of Mr. George Gould's connection with the "Orient" Railway as a member of its board of directors. But the "Orient" will build its own line from Sweetwater to San Angelo, Texas, about 100 miles. North from Sweetwater the company has completed 22 miles as far as Sylvester, and is pushing construction northward from the latter point to the Red river.

B. & O. Annual Statement.

The Baltimore & Ohio Railroad Co.'s statement for the fiscal year ended June 30 shows gross earnings from traffic, 1905, \$67,689,908; 1904, \$65,071,081; increase, \$2,618,917. Expenses, 1905, \$44,710,604; 1904, \$43,628,864; increase, \$1,081,740. Net earnings, 1905, \$22,979,304; 1904, \$21,442,217; increase, \$1,537,177.

For June the statement shows gross earnings, 1905, \$5,768,103; 1904, \$5,381,898; increase, \$386,205. Expenses, 1905, \$3,913,299; 1904, \$3,520,208; increase, \$393,091. Net earnings, 1905, \$1,854,804; 1904, \$1,861,690; decrease, \$686. June expenses were affected by charging up depreciation on marine equipment for the year and by other adjustments in closing accounts. The surplus for the year, after paying fixed charges, dividends, etc., was \$3,659,000.

Tennessee Railway's Extension.

Mr. W. O. Dyer, chief engineer of the Tennessee Railway, writes from Huntsville, Tenn., to the MANUFACTURERS' RECORD as follows:

"We have just closed bids for the construction of 21 miles of new work this year. The contractors are Wm. McD. Burgin & Co. of Marion, N. C., and Eskridge & Carroll of North Carolina and South Carolina. The road leaves the Cincinnati, New Orleans & Texas Pacific Railroad at Oneida, Tenn., and traverses New River and Paint Rock coal fields, and will develop very extensive timber lands. We constructed nine miles of this road last year; before that four miles had been built. Mr. Bird M. Robinson of New York is president."

Palestine Wants a Railway.

Secretary Frank Morris of the Palestine Board of Trade, Palestine, Texas, writes the MANUFACTURERS' RECORD concerning a recent press report as follows: "We have some letters addressed to the

Palestine Board of Trade from parties in which they state that they thought it possible to work up an interest between the citizens here and in Dallas in an inter-urban railway, but nothing definite has ever been done regarding it. * * *

"I know of no other city anywhere in the country that really needs a street railway more than Palestine, and at present I do not think it will be a difficult matter to interest sufficient capital in Palestine to equip a first-class line."

Option on Paducah Plants.

The Stone & Webster Company of Boston, Mass., has obtained an option on the railway, gas and heating companies at Paducah, Ky., with a total capitalization of \$1,440,000, and will, it is said, shortly close the deal for them. The principal owners in the three companies are Jos. L. Friedman, J. W. Keiler, Geo. C. Thompson, A. S. Thompson, Geo. C. Wallace, Jas. C. Utterback, S. B. Hughes and W. E. Paxton of Paducah, and Max B. Nahn of Bowling Green, Ky.

Deepwater Railway Yard.

Mr. William N. Page, chief engineer of the Deepwater Railway Co., writes from Ansted, W. Va., to the MANUFACTURERS' RECORD saying that a press report is practically correct in saying that a contract has been let to build extensive yards at Deepwater, W. Va., at a cost of about \$100,000. He says that the yard will have eight tracks, and work is now in progress. The tracks under construction will accommodate about 400 cars.

Mr. Taggart May Build a Line.

President T. Taggart of the French Lick Springs Hotel Co. writes from French Lick, Ind., to the MANUFACTURERS' RECORD concerning a recent press report which said that he was interested in a plan to build an electric railway from Memphis, Tenn., to Clarksville, Miss. He says that the proposition is merely under discussion now, and that no definite steps have yet been taken in regard to construction.

Railroad Notes.

The Missouri, Kansas & Texas Railway will, it is reported, build extensive shops at Hannibal, Mo. A new round-house is also contemplated.

The Central Railway of Georgia has ordered eight new passenger coaches and two combination passenger and baggage cars from the American Car & Foundry Co. of St. Louis.

Mr. J. F. Hinckley, chief engineer of the St. Louis & San Francisco Railroad Co., writes from St. Louis, Mo., to the MANUFACTURERS' RECORD denying the press report that the company would build a line from Hope, Ark., to Alexandria, La.

The MANUFACTURERS' RECORD is indebted to A. R. Blakely & Co. of the New St. Charles Hotel, New Orleans, La., for an artistic leather-bound publication entitled "New Orleans, the Crescent City," containing 36 pages of half-tone illustrations of public buildings, street scenes, views of the parks, river-front, churches, monuments, etc., of the city, together with some succinct facts telling folks why they should visit New Orleans.

Lieutenant-Colonel James B. Quinn of the United States Engineer Corps, in charge of the southeastern division of river and harbor improvements, has urged in his annual report a modification of the original project for work on the inside waterway from Savannah to Fernandina, so that there may be provided a navigable channel 10 feet deep at mean low water with a width of from 100 to 200 feet over the entire route.

MINING.

ALABAMA COKING COALS.

Their Possible Relations to the Export Trade.

Editor Manufacturers' Record:

My attention has been called to an article in your paper of June 29, entitled "A Plea for Alabama Coal," written by C. F. Z. Caracristi, C. E., and whilst I am in sympathy with Mr. Caracristi in his effort to improve the export conditions in the South, I am afraid his zeal has caused him to overstate the conditions in Alabama. His "Plea for Alabama Coals" seems to be a plea against Alabama coals and an advertisement for other coals available. His mistake made is in considering a part of the Alabama coal field and not the whole, and taking the coking coals now used for furnace purposes as the basis of his comparisons.

His broad statement that a certain class realized the "absolute futility of certain and effective competition from Pennsylvania, West Virginia and Wales" does not seem to be warranted by the facts well known here to those who have given the matter some attention and study. There are, as stated by the State geologist, 23 workable seams of coal in Alabama, varying in ash from 2 per cent. to 11 per cent., covering about 8000 square miles, only a small portion, however, being sufficiently low in volatile matter and high in fixed carbon to be classed as coking coal, and it is upon the coking-coal area lying on the east side of the Warrior basin, being nearer the iron deposits, that large developments have taken place.

Primarily the foundation of the Birmingham district was upon iron development, and to a large extent this is the basis of industrial progress today, and as such has dwarfed the coal development. Having a local market, the operator has not reached out for outside trade. This has been especially so for the last few years, as the home consumption has absorbed a large increase in coal output, with increasing prices, and the coal exported is less than it was five years back.

I judge that it is upon these coking coals that the comparison with other coals is made, and even in these coal seams, admittedly high in ash, I fail to find as low as 13,500 British thermal units as an average. About nine-tenths of the coke made here is derived from four seams, Brookwood, Blue Creek, Mary Lee and Pratt, all of them having more or less slate partings, and require washing before coking, resulting, however, in a satisfactory coke carrying from 9 to 12 per cent. ash, .60 to 1.25 per cent. sulphur, and from 85 to 89 per cent. fixed carbon. This is a good coke for furnace use; in fact, the furnaceman will not use a low-ash coke. One of the reasons Connellsville coke is considered the standard furnace coke of this country is on account of its averaging about 11 per cent. in ash. Whenever you lower the ash below, say, 10 per cent. you weaken the cell linings, and in these days of large furnaces it is necessary to have great strength as well as large porosity to have a successful furnace fuel. The remaining one-tenth of coke is made from the Black Creek, Milldale and Underwood seams, which run from 2 to 5 per cent. in ash and from .6 to .9 of 1 per cent. in sulphur, 22 to 35 per cent. in volatile matter and from 66 to 77 per cent. in fixed carbon, producing a coke running from 4.50 to 9 per cent. in ash, .50 to .75 of 1 per cent. in sulphur, 1.10 to 1.70 in volatile matter and moisture and 88 to 94 fixed carbon. This would appear to be a fine coke, but it is only used by the furnaces as a "mix" with the other coke, as its strength is not suffi-

cient to carry the burden of ore and stone, but gives higher heat, and for this reason is sparingly used. This, however, makes a fine foundry coke, and is largely used for this purpose, also for smelting purposes, as the burden in a cupola is comparatively light. It is from these latter-mentioned seams of coal that the comparisons for export purposes should be made, as upon them we will have to mainly rely for a supply, for the reason that the coking area is restricted and cannot be spared for this purpose. By coking area I mean soft coals which will yield from 60 to 67 per cent. of coke to the ton of coal charged.

The Warrior field contains about 95 per cent. of the coking coal in Alabama. About one-sixth of its area alone will fill the above-mentioned requirement, and is confined to the soft coals on its eastern side. The coal hardens and increases in volatile matter as you go west, until the ratio of product obtained in a coke oven gets below 50 per cent. in the extreme western portion of the field. Coke made in this western section is fit only for domestic use.

The high-carbon seams have the most extensive outcrops of all the seams in the field, aggregating 700 miles, according to the report of the State geologist, and being high in bitumen and hydrogen, where not hard enough to stand handling make a fine briquette. At many points these coals have sufficient bitumen to make a good briquette under heavy pressure without the admixture of any binding material. At other points the coals are hard enough to stand transportation without any preparation at all. From an experience of several years, some ten years since, I found the main trouble in competing with West Virginia and Welsh coals at Mexican Gulf ports was loss in weight in transporting the soft coals of the eastern edge of the Warrior field on account of disintegration by exposure (commonly called "air slack"), being as much as 19 per cent. in one cargo to Vera Cruz, Mexico. This is a strong argument in favor of briquetting, and I agree with Mr. Caracristi that it is necessary to briquette our soft coals to enter this trade. However, why not briquette the coal carrying about 2 per cent. of ash, which is high enough in bitumen to be successfully compressed without a binder, and which has a present market price at the mines of \$1.15 per ton of 2000 pounds, instead of a coke that has a market price of \$3.50 to \$3.75 per ton and will require an expensive pitch or other binder in large percentage (probably 7 per cent.) to hold it together?

There are several mines now opened that can supply such coal, and considerable territory undeveloped that can be obtained at reasonable prices. Also there is about 150,000 acres of available land carrying this low-ash coal, where the coal is hard enough to stand the handling and exposure to a tropical climate. With some 3,500,000 tons of coal used in the Gulf of Mexico and Caribbean sea ports, Alabama is now shipping about 200,000 tons, against about 500,000 tons 10 to 12 years ago. This is not caused by the quality of coal shipped, but is to be attributed to the local demand consuming the output of the mines and the railroads not particularly fostering such trade on account of its requiring a low rate, with no return freight for the coal car. With a low-grade railroad to tidewater, and this can be obtained from points carrying these low-ash coals within a distance of 200 miles, with preparation of the coals where needed, and at other points with lump coal as it comes from the mines, this entire trade would be furnished from this State. This is a good opportunity for outside capital, as it requires new develop-

ment, there being only 200 coke ovens outside of iron companies on these seams; these are furnishing a foundry coke exclusively, and have no difficulty in disposing of this product at \$3.50 per ton f. o. b. cars at mines. A good briquette coal would command the mining business of Mexico and Central America, as it is possible to guarantee weights, and the market is there, as has been shown by our trade reports.

Alabama has the nearest coal field, and should naturally supply this demand. Our coals are suitable, or can be economically prepared for such market, and there is no question it should be furnished from this district.

There is small chance of developing an immediate supply of coke for export purposes, as the coking-coal territory is held by furnace companies, and the demand for coke for several years has exceeded the product.

The specifications of the Isthmian Canal Commission as published in Mr. Caracristi's article are extremely rigid, and I do not believe they can be literally complied with by any coal or coke operator from any district, certainly not by Connellsville, with its 11 per cent. ash, or Pocahontas, with its .6 of sulphur; in fact, they cannot be complied with by any coal or coke company anywhere, so far as I know. I have never heard of a coal "free from dirt, slate or other foreign matter," nor of a coke "free from sulphur and other impurities," and do not see how it could be "fresh clean coke" after transportation of from 2000 to 3000 miles, including an ocean voyage in a humid atmosphere; necessarily an unusual amount of moisture will be found in the coke on arrival.

It seems to me anyone bidding on such a contract would first inquire what latitude the inspector was allowed before submitting his bid. The 5 per cent. in ash in coke can only be obtained in West Virginia and Alabama, but either coke would only be what is termed domestic or fuel coke, and would be too weak and light for other purposes. It would be interesting to know who had the temerity to agree to furnish this coke under such specifications, and by whom it was inspected.

J. A. MONTGOMERY,
Consulting Engineer.
Birmingham, Ala.

Minerals of Texas.

The MANUFACTURERS' RECORD is informed that Dr. William B. Phillips, director of the University of Texas Mineral Survey, has relinquished the idea of enlisting private enterprise for the continuance of at least a portion of the work of the survey, in the lack of a State appropriation, and that he will return to private business examining mining property, oil land, etc., with his headquarters at Austin. Meanwhile the possibilities in mineral development in Texas appear in an interview in the Houston Chronicle with Dr. J. F. Harlan, who is interested in mines in El Paso county. Speaking of the trans-Pecos section of Texas and of Brewster county, Dr. Harlan said:

"I visited that section in 1904 and became personally well acquainted with the mineral deposits in that and Presidio county. The topography of the country is ideal as a mineral-bearing section. Nearly all kinds of ores are found in these mountains, gold, silver, copper, tin, lead, quicksilver and marble. That which is now principally worked is cinnabar or quicksilver.

"In the 'Big Bend,' which extends 30 miles east and west, is what is known as the 'Terlingua district,' now one of the greatest quicksilver-producing districts in the world. The output of 1903 ranked third in the producing districts of the

world. There are about 30 companies with large capital working these mines.

"Recently I met Mr. N. E. Smith of Terlingua, who is the manager of Sanger Bros.' mine at Terlingua, and they have spent \$150,000 in development of their quicksilver mine. N. E. Smith says they now have ore on the dump at the mine that will pay back every dollar they have expended, and plenty more in sight in the mine, and they are now preparing to put a smelter on the ground to mill their own ore.

"Presidio county is also very rich in minerals in the Chinatti mountains near Shafter. Shafter differs from the rest of that country and is blessed by the beautiful running stream of Cibelo creek, which enables the Presidio Mining Co. to have plenty of water to operate its mill and mine.

"Here is a rich silver mine in Texas that few people know anything about, yet it has been in active operation for 22 years, running night and day, crushing 60 tons of ore per day, and running from 150 to 200 men with a monthly pay-roll of from \$15,000 to \$20,000. It is impossible to learn how much these mines have produced, but it is evident they have produced great fortunes, besides meeting all operating expenses. In going through the mine we first went down to the 500-foot level, and there went through many miles of tunnels on this level, coming to where large pockets of ore had been scooped out, in some instances more than 100 feet in length, 30, 40 or 50 feet in width, and in places 50 feet high, and in order to support the roof great pillars of ore must be left. There are some 25 miles of tunnels in this mine, with many miles of track for the ore cars. There are vast bodies of ore in sight at these mines, and peculiar to this particular section the ore is found in pockets and some of it very rich in silver. We also passed through several miles of tunneling in the 600 and 700-foot levels, where much development work had been done. These mines are free from water, which in many localities is a source of great annoyance and expense. These are said to be the only silver mines in the United States that have never shut down since first put into operation, which is positive proof of the valuable deposits of silver ore.

"There are many other localities in the Chinatti mountains where good silver ore is found. In some surface diggings as high as 60 ounces of silver per ton is shown by the assay, but scarcity of water and timber and rough and mountainous country, and being so far from railroad transportation, almost renders these otherwise valuable properties worthless.

"Since Texas has developed oil in such vast quantity crude oil is shipped over the Southern Pacific to Marfa, where it is handled by wagons to these mines and is now exclusively used by them for fuel purposes.

"Of all this trans-Pecos country El Paso county is the most extensive mineral field, with the greatest diversity of minerals. The mineral resources of this region are varied, including gold, silver, tin, copper, lead and tetanium. Coal has recently been found, and extensive preparations are being made to mine the same. Gypsum, salt and native sulphur occur in great quantities. Building stones, marble, limestone and clay are found in quantity, and the presence of underground water is widespread. The occurrence of tin in the Franklin mountains 10 miles north of the city of El Paso, is now being extensively opened up by Colonel Greene, and at a tin mine now in operation at Sierra Blanca, where have been installed a stamp mill and concentration works, the ore is being taken out and shipped in the form of concentrates. There are quite

extensive copper deposits and mines in the Guadalupe mountains near the New Mexico line, besides in these mountains and in the Delaware mountains there are some gold deposits that may yet prove to be valuable mines.

"Speaking of the Delaware mountains, we are reminded of the large deposits of gypsum covering an area of 600 square miles in Texas and extending into New Mexico, and in places this formation is 200 to 300 feet thick. This gypsum supports a peculiar variety of bunch grass (yesso), and also bears a stunted growth of juniper, whose occurrence practically is limited to the gypsum. Native sulphur occurs associated with gypsum at several localities in Northeastern El Paso county. Some prospecting and development work have been done and a few carloads of sulphur have been shipped. These sulphur beds may yet prove to be quite valuable when more fully developed."

In Southwestern Kentucky.

Editor Manufacturers' Record:

Probably I am in a position to give you some valuable information, as I have been living in this section all my life, about 45 years, and have been interested in the resources available here. I was born in Hopkins county, Kentucky, and lived there about 25 years. I am satisfied that there are from one to three veins of coal ranging from three to nine feet in thickness under almost every foot of ground in that county, and extending north probably to the Ohio river, and even under the river into Illinois and Indiana, west to Treadwater river, the county line, and east to a portion of Muhlenberg and Ohio counties, and also into Christian county about three or four miles from the Hopkins county line. The best coal found, however, is in this county and in the northern part of Hopkins county. But the top vein is only three to five feet thick, and no other veins have been investigated or worked. The top vein, that is worked mostly in these counties, crops out in many places on the hillsides and creek banks.

Trigg county is probably the most noted of any in Kentucky for its rich deposits of iron ore. It joins Christian county on the west, and it is about 25 miles from the nearest coal known to these iron deposits. Iron furnaces were successfully operated in the pioneer days east of the Cumberland river in this county, and the White & Dixon Company of this place is now building furnaces on the west side of the Cumberland river in this county, and claims that it has an inexhaustible quantity of good ore. I do not doubt this, as their experience is sufficient, they having been in the business before in Tennessee. This iron-ore field begins within about 30 miles of the Ohio river and runs north through Kentucky, ranging in width 20 to 30 miles, and runs into Tennessee and probably through that State into Alabama. I do not know if there are any breaks. It follows between and on either side of the Cumberland and Tennessee rivers. There are not very many places where it is as rich as in Trigg county. Grand Rivers, in Livingston county, is the point farthest west where furnaces have been operated. There is no railroad touching this vast iron deposit between Grand Rivers and Clarksville, Tenn., and there are no furnaces in operation convenient to the railroad nearer than Sheffield, Ala.

Now about timber resources. We have plenty of timber to do us, but not much to spare, as the day is not far in advance when millions of feet of lumber will be needed here to develop this great coal and iron country. I have been in the lumber business 25 years, have manufactured, bought and sold lumber from Kentucky to Mississippi, have prospected for timber

in some of the Southern States, and have not seen anything to equal the timber in Hopkins, Christian and Trigg counties, Kentucky. I have cut lumber for more than six years in each of these counties, but now it is not as it used to be here, as millions of feet of lumber and staves and crossies have been shipped from these counties. Still, we have quite a fine lot of good timber left. But people have begun to realize the value of it; so it stands not to be sacrificed as it was 10 or 20 years ago.

I have never seen any land better than some of this for farming, and I have never seen any worse than some of this for farming. There are thousands of acres of the very finest land in the world in all three of these counties. The iron region is generally poor soil, coal land moderate, and limestone, where neither coal or iron is found, is the very best for agriculture. The southern part of Christian and the eastern part of Trigg counties cannot be beaten for this. Farming lands range from \$10 to \$100 per acre in price. Coal and iron lands range in price according to the purchaser. I can buy thousands of acres of the very best coal land from \$5 to \$15 per acre, but a coal company or a strange man to come in here to buy or take options excites the people. The people are afraid they will ask too small an amount for their land, and so such purchasers generally have to pay \$15 to \$30 per acre for all they get. Iron-ore land is much cheaper than any other.

W. B. WOODRUFF.

Cadiz, Ky.

Production of Pyrite.

The chief sources of the supply of pyrite in the country are deposits in Virginia, California and Massachusetts, though smaller amounts are obtained in Alabama, Georgia, Indiana, New Jersey and Ohio. Dealing with the production of pyrite in 1904, Dr. Joseph Hyde Pratt of the United States Geological Survey says that new deposits of pyrite in Alabama have recently become available through the completion of the Eastern Railroad of Alabama from Talladega to Pyriton. For this material there should be a large demand at Nashville, Tenn., as a source of raw material for its fertilizer factories. These Nashville factories are already advantageously located with reference to the Tennessee phosphate fields, so that, with easy access to the Alabama pyrite deposits secured, they should be able to compete readily with any other fertilizer plant. There was a slight decrease in the production of pyrite for the manufacture of sulphuric acid in the United States during 1904, but a very large increase in the production of natural sulphur, the combined production amounting to 333,542 long tons, valued at \$3,460,863, as compared with 233,127 long tons, valued at \$1,109,818, the production of 1903, an increase of 100,415 tons in quantity and of \$2,351,045 in value. This exceptionally large increase in value as compared with the increase in tonnage is due to the very large increase in the production of sulphur. A considerable quantity of pyrite is also mined for pyritic and allied smelting and for use as a flux, which would increase the output by 75,000 to 100,000 tons. Over one-half of the total production of pyrite was obtained from Virginia. The average price received for the 1904 production was \$3.86 a ton, an increase of 24 cents as compared with \$3.62, the average price received for the 1903 production.

Purchased Coal Lands.

Advices received at Fairmont, W. Va., announce that C. H. Muercke of Chicago has purchased 4000 acres of coal lands in Brooke county from the McCord estate at \$200,000. In addition to this property,

the same purchaser has secured lands from the Frank Armstrong estate, Charles Swertfeger, W. F. Counselman, J. S. Cheffey, Robert Miller, Nancy Wills estate, William Pitman, W. B. Hicks, Jas. Hukill, Philip Oram, Lee Wilson, C. and J. Bonar and T. C. Crouch. The lands are all in the vicinity of Wellsburg, W. Va., and it is thought that development work will soon be started.

Coal Property Leased.

Messrs. Eugene Vowels and J. D. Wills of the Yellow Creek Coal Co. of Middlesboro, Ky., have leased 500 acres of coal lands from the Innes estate. The property adjoins that of the Nicholson Coal Co., and is said to contain one of the richest deposits in the Middlesboro district, having a vein of coal more than six feet in thickness. A company capitalized at \$20,000 has been organized and will install a mining plant at once for the development of the lands.

Large Coal Contract.

The Somerset Coal Co., controlled and operated in connection with the Consolidation Coal Co. of Baltimore, Md., and the Fairmont Coal Co., has secured a contract from the Interborough Rapid Transit Co. of New York for 400,000 tons of coal. The coal will be mined at Somerset, Pa., and shipped over the Baltimore & Ohio to Jersey City, from whence it will be conveyed in barges to the company's works in New York.

Zinc Property Bought.

It is announced from Galena, Kan., that Messrs. J. H. Schlund and R. M. Padgett, Chicago capitalists, have purchased the Chapman & Lennan mine, concentrating plant and the sublease on the Reliance lease at Neck City, Mo. The property is considered one of the best zinc mines in the Missouri-Kansas district, five faces of ore, each 30 feet in height, having been opened in it.

Coal-Land Development.

Messrs. A. S. Vandegraaf and J. W. Miller of Tuscaloosa, Ala., are promoting the organization of a company for the purpose of developing a tract of about 3000 acres of coal lands near Tuscaloosa. The quality of the coal is said to be very similar to that mined at Brookwood.

The Excelsior Coal & Lumber Co., with D. C. Zollicoffer, president, and W. D. Browning, secretary and treasurer, has been incorporated at Richmond, Va., with a capital stock of \$500,000, to mine and deal in coal and other minerals.

An Attractive Southern City.

The State of Georgia contains some of the most important and progressive cities in the South. In the progressive class are many cities of the smaller size which are growing steadily, and whose business men are ever on the alert to advance their interests. Lavonia, on the Southern Railway, in Northeastern Georgia, is one of these progressive little cities. It has about 1000 inhabitants, and its industries include a cotton factory, flour mill, two newspapers, two cottonseed-oil mills, two banks, etc., besides retail establishments transacting a profitable business. The surrounding territory is an ideal one for farming, cotton-growing, grain-raising, dairying, fruit-growing and truck-farming. The climate is healthful, Lavonia having an elevation of 1000 feet. Manufacturing enterprises are offered inducements to locate in Lavonia, and the Board of Trade, of which R. T. Poole is secretary, can supply information to inquirers.

The Tyler (Texas) Commercial Club has elected Mr. S. Milne secretary.

MECHANICAL

The Model Factories at Phillipsburg.

[Special Cor. Manufacturers' Record.]

Phillipsburg, N. J., July 24.

In scope of plan, detail of construction and adaptation to economical operation, the new Phillipsburg shops of the Ingersoll-Sergeant Drill Co. are so notable an improvement as to have attracted very wide attention among all who are interested in shop construction and operation. Technical descriptions have been printed in most of the journals in this country devoted to special subjects covering the ground from a specialist's standpoint. I have been asked by the MANUFACTURERS' RECORD to visit the shops and treat the subject more from a news or "story" standpoint than the technical.

Before beginning the description of this great group of vast buildings it may be interesting to give a glance back at the history of the house of Ingersoll-Sergeant. As in the case of so many of the great industrial establishments of this country which have come to be so distinctive of the last few decades of American progress, the beginnings of this house were of the most modest sort, and extend back more than a generation. The career of this firm is a typical instance of how great things may come from small beginnings when the natural growth is fostered and directed by a keen intelligence, conservative, yet looking beyond to the possibilities of the future. The business of the company was started almost 40 years ago with the manufacture of the old Ingersoll rock drill. In the course of a few years the patents owned by the Sergeant interests were acquired. Messrs. Ingersoll and Sergeant—one an engineer and designer, the other a practical machinist—joined forces and began in a small way the manufacture of pneumatic rock drills. The interests of these two gentlemen were merged into an organization known as the Ingersoll-Sergeant Drill Co., a name which has become known throughout the world wherever air power is used. The business was at the outset simply the manufacture and sale of air and steam drills for all purposes of rock excavation. Although pioneers in their line, these builders were entirely successful in making practical application of the principles of compressed air to the tools they manufactured, and their business had an important and continuous growth. It was only a logical step forward to the manufacture of air compressors for supplying power to the rock drills, calling for greater accommodations and the acquisition of two large buildings in New York city. This latter branch of the business grew so rapidly and proved so profitable as to suggest naturally another step toward widening the field of usefulness for compressed air by producing and introducing new machines for novel applications of this infant power. Following along this line the output of the company has grown to include, besides the original rock drills and the somewhat later line of air compressors, quarry machines, coal-mining machinery, contracting machinery, pneumatic tools, pneumatic pumping systems—in fact, the whole field of air power is now covered with the exception of the air brake and pneumatic locomotive. Twelve years ago it was found necessary to secure greater accommodations, and the removal from New York city was decided upon. A site at Easton, Pa., on the Lehigh river, was selected, 80 miles west of New York and about the same distance north of Philadelphia, on the main lines of the Lehigh Valley and Jersey Central railroads, and in the heart of the iron and coal region of Eastern Pennsylvania. Here were constructed shops which were intended ulti-

mately to utilize about 20 acres of ground, and which in their completed state employed 2000 men and had an annual capacity of over 68,000 horse-power of air compressors, about 3500 rock drills, 1000 coal cutters, and, in addition, a great number of stone channelers and other quarrying machines and special apparatus for mining. Being the oldest and largest concern in their line anywhere, with the greatest experience in the use of rock drills, air compressors, quarry and mining machinery, having the most modern and complete works of any in the field, and using the strongest and best material to be obtained, the product of the Eastern shops came to be known as the most advanced and most efficient of any in the world, and the company's machines were sold around the globe.

In the construction of the gigantic Subway in New York, 16 of the 26 air compressors used by the various subcontractors were of Ingersoll-Sergeant build and 194 of their rock drills were used on the work. In addition, their machines have been employed in about all the important tunnel work done in this country and in Canada for years past—a list aggregating some 18 or 20 large undertakings. An idea of the magnitude of the business may be gained from the fact that more than 50 per cent. of all the rock drills used in the world were built by this company, while its air compressors range in capacity from a small machine of 30 cubic feet capacity to the giant of 9000 cubic feet displacement per minute; they are built in nine distinct types and more than 600 different sizes. In the past 35 years the company has turned out more than 52,000 of its rock drills, which have participated in every great public work and had a part in every great private enterprise where rock excavation was involved. In tunnels, canals, quarries and mines the wide world over they have set the pace for rapid work and have been the standard of endurance. Ingersoll-Sergeant air compressors constitute the central power plant in the greatest sandstone quarry in the world at North Amherst, Ohio. Their compressors, and, in fact, the entire power installation, comprising the largest contracts ever awarded for this class of machinery, have been adopted by the Pennsylvania Railroad Co. for the construction of its tunnels under both the North and East rivers of New York city; in fact, the 12 subaqueous tunnels under New York city from different directions are being driven exclusively by means of Ingersoll-Sergeant air compressors, the number aggregating 38 machines, with a total free-air capacity of more than 125,000 feet of cubic air per minute. In addition to these products, the company has also built up an important business in pneumatic tools, such as chipping and riveting hammers and rotary and reciprocating piston drills, air lifts, coal cutters and coal drills, drift bolt and sheet pile-drivers, tamping machines, air receivers and reheaters, hose and hose couplings, and in the manufacture of ticket choppers or cancellers, such as are in use in elevated railroads, railways and ferries of this country and England, and which were supplied to the New York Subway by the Ingersoll-Sergeant Company.

At the time the Easton shops were erected it seemed that this space was surely adequate to all demands for years to come. But even the wisest foresight could not anticipate the remarkable growth the business would enjoy under the stimulus of the country's prosperity. Additions to the original Easton plant were repeatedly made, but it soon became evident that the river on the one hand and the hills on the other set natural limits to that location as a manufacturing center.

This condition was realized about eight years ago, and since that time the best efforts of the company's officers and engineers have been applied to the problem of providing a manufacturing plant which, by repeated extensions and additions, might be maintained adequate for all future needs. The problem was not an easy one. It was not simply a question of securing enough land, though this was essential, but upon that property must be built shops which, while producing machinery at a minimum cost, would be susceptible to indefinite enlargement without sacrificing any of their efficiency as a productive machine. With this idea in view, and not desiring to abandon the works and location at Easton, or to lose the advantage of workmen who had been trained up in their own methods, the company secured a tract of about 200 acres near Phillipsburg, N. J., about four miles distant from the older shops and affording every natural advantage as well as every convenience for trackage and shipping. The new factory, therefore, constitutes not simply a relocation, but rather an extension.

At the shops at Easton, which themselves constitute one of the largest and best equipped of any plants of the kind, there will be continued the manufacture of straight-line air compressors, mostly of the smaller sizes, both steam and power driven, used more particularly in mining, and also the track and bar channelers, quarry machines, pneumatic tools, Haeseler chipping and riveting hammers, the smaller size hammer drills for rock cutting, the small pneumatic engine drills for drilling metal and wood, and the ticket choppers. There is also retained here an erecting shop where parts are assembled, adjusted and put in working order and are given the severest kind of working tests by means of various ingenious devices, so that no pneumatic tools or other machines go out until they stand the test. There are also at Easton a smith shop where various drop forgings are made; an oil-tempering department for the treatment of steel parts, such as rods, shafts, pneumatic-tool parts, etc. There is also a warehouse at this point.

There have been moved bodily to the Phillipsburg plant the drill department, which includes also coal-cutting machinery. There is also nothing left at Easton of the foundry. In the air-compressor department of this plant there will be a considerable addition to the new equipment, and here will be built the heavier types of air compressors, both steam and power-driven. The offices, comprising that of the general manager and those of the departments of engineering, ordering, purchasing and accounting, are to be removed from Easton to the commodious new office building on the grounds at Phillipsburg.

Before actually beginning the plans for the new works competent men were appointed to visit the best shops in the country and study the problems of arrangement, productive methods, shop organization, etc. After these investigations had gone along for several years the observations were tabulated, classified and made the subject of extended study, with a view to determining what features might advantageously be applied to the needs of the Ingersoll-Sergeant Company. With this information in hand, representing the best practice in all manufacturing fields, together with a knowledge of the company's peculiar needs as developed in 30 years of shop experience, the company's engineers then prepared the plans which have today materialized in the new Phillipsburg works, the largest shops in the world devoted exclusively to the manufacture of air-power appliances.

At Phillipsburg there is now a group of some 15 buildings, located in the center of

the 200-acre tract, and all so arranged that, while gigantic as some of them already are, they may be extended almost indefinitely to meet any requirements within the range of a remote possibility. In the grouping not only has this provision for future growth been completely secured, but at the same time the arrangement is such that in the operation of the plant the utmost economy in time and labor is effected. There are no false moves or retracing of steps, but so far as possible materials move in procession till the finished product is ready to be loaded from the shipping-room onto the cars. On one side of the company's property there are tracks connecting with the Central Railroad of New Jersey, and on another is a system of standard-gauge tracks of their own, connecting with every department by spurs and switches, and the company's equipment includes a heavy freight and crane locomotive and sufficient freight cars.

Approaching the plant from the city the first building encountered is the massive foundry, 160x500 feet in dimensions, with pattern-shop, pattern-storage and castings-cleaning buildings alongside. Taking advantage of the contour of the land, a slope was so benched for the location of the foundry that the foundry floor is some 18 feet lower than the level of the main plant. It has thus been possible to construct under the hill bins for coal, coke, ore, sand, etc., on a level with the cupolas, but with tracks over the bins so that hopper cars may dump their contents directly into the bins. Leading from the top of these bins are steel bridges to the charging floors of the four cupolas the foundry contains, so that such materials as are used on the upper level may be wheeled directly to the charging doors. The foundry contains eight core ovens. As throughout the entire plant, there is here a thorough equipment of electric traveling cranes, which command every part of the building. Some of the cranes are of 20 tons capacity.

Between the foundry and the main group of buildings is the three-story office building.

In the immediate front of the main group are the compressor manufacturing building and the machine shops side by side, each 100x260 feet in dimensions, and connecting at the ends with the compressor erecting shop, 120x320 feet in size, and with a clean height under roof trusses of 44 feet. These shops open into the shipping department, 60 feet wide by 620 feet long, at the extreme end of which is the drill manufacturing shop, the extreme dimensions of which are 260x450 feet. Within the court thus formed are the power plant, which provides not only power, but light and heat for the entire establishment; the blacksmith shop, with its equipment of enormous steam hammers and forging presses, and the buildings of the drill-testing and steel-treating departments.

In construction the buildings are models of their kind, mill and steel construction prevailing throughout, with walls of brick, roofs of concrete and of plaster of paris, and the floors all being of concrete. In a number of the buildings the roofs are of saw-tooth construction, and all of them are arranged to give the most light obtainable, which effect is further heightened by the universal application of white paint to the walls, columns, girders and trusses of the interiors.

There are acres of machines in the various shops, ranging from those of most delicate mechanism to the ponderous masses of iron and steel found only at rare intervals outside an international exposition. Here are in use the latest inventions and the most modern machinery in every line, and even a layman must be

arranged them al- almost irrements ssibility. his pro- mately arrange- n of the me and e moves as pos- till the led from On one ere are al Rail- her is a of their artment mpany's ight and ht cars. he city he mas- ensions, ge and ongside. of the he loca- ry floor l of the sible to l, coke, mpolas, at hop- directly top of ch-arg- oundry as are wheeled e foun- through- a thor- veling of the of 20

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impressed by the completeness and magni- tude of the plant and the thorough system and perfect management which prevail throughout. Everything that needs to be done has been done, and when an additional water supply was found desirable

drives the perfectly cemented laps and the weight and toughness of the oak leather give satisfactory service and years of wear. The Baltimore Belting Co. was first established at No. 6 East Lombard street, which was in the line of the great

promptly. In providing a new home for the enterprise the company has erected a modern structure at 113 and 115 West Lombard street, to which it removed several weeks ago, and where it is now installed with a modern outfit for rapid pro-

tion of this building is presented herewith. Besides making belting, the Baltimore Belting Co. manufactures leather pickers for cotton mills and strappings, and acts as agent for the Limestone wood-split pulleys.

The Central Metal & Supply Co.

In the territory tributary to Baltimore, especially throughout the South, there is a large and steadily-increasing demand for brass and copper goods, piping, fittings, valves, tools, babbitt metals, sheet zinc, pig-lead, spelter, plumbing and steamfit- ting supplies, pumps and hydrants, etc. This demand is one that the Central Metal & Supply Co. of Baltimore is assisting to meet, and it has recently located in the new and commodious modern building erected for its purposes at 609-611 East Lombard street. Some slight reference to this structure, an illustration of which is presented herewith, is of interest to the Southern trade.

The building is four stories high, 45x90 feet. It is substantially built. The first floor, which is paved with cement, has a ceiling 14 feet high, and bins extending from the floor to the ceiling are constructed to hold the various size fittings, and a hanging gallery extends around this floor to give ready access to the higher bins. In the center are racks for the different sizes of brass and copper rods and tubing, while in the rear are a number of racks for iron pipe. On the second floor are the offices of the company and racks for brass and sheet copper. These racks are all arranged according to the size, weight and finish. There is also located on this floor bins containing all kinds and sizes of plumbing and steamfitting supplies. The third floor contains specially-designed racks for earthenware and soil-pipe fittings and enameled bathtubs, and the fourth floor has a full line of pumps and hydrants. The Central Metal & Sup-



NEW HOME OF BALTIMORE BELTING CO.

the company promptly established a system, and one capable of meeting all requirements for a long time to come. Great, almost phenomenal, has been the growth of the company in the past, and, promising as its future is, it is difficult to see how in present circumstances there could come a time when facilities for expansion here would become cramped or exhausted. In short, it looks like at least the compressor and drill departments of the institution have found a permanent home.

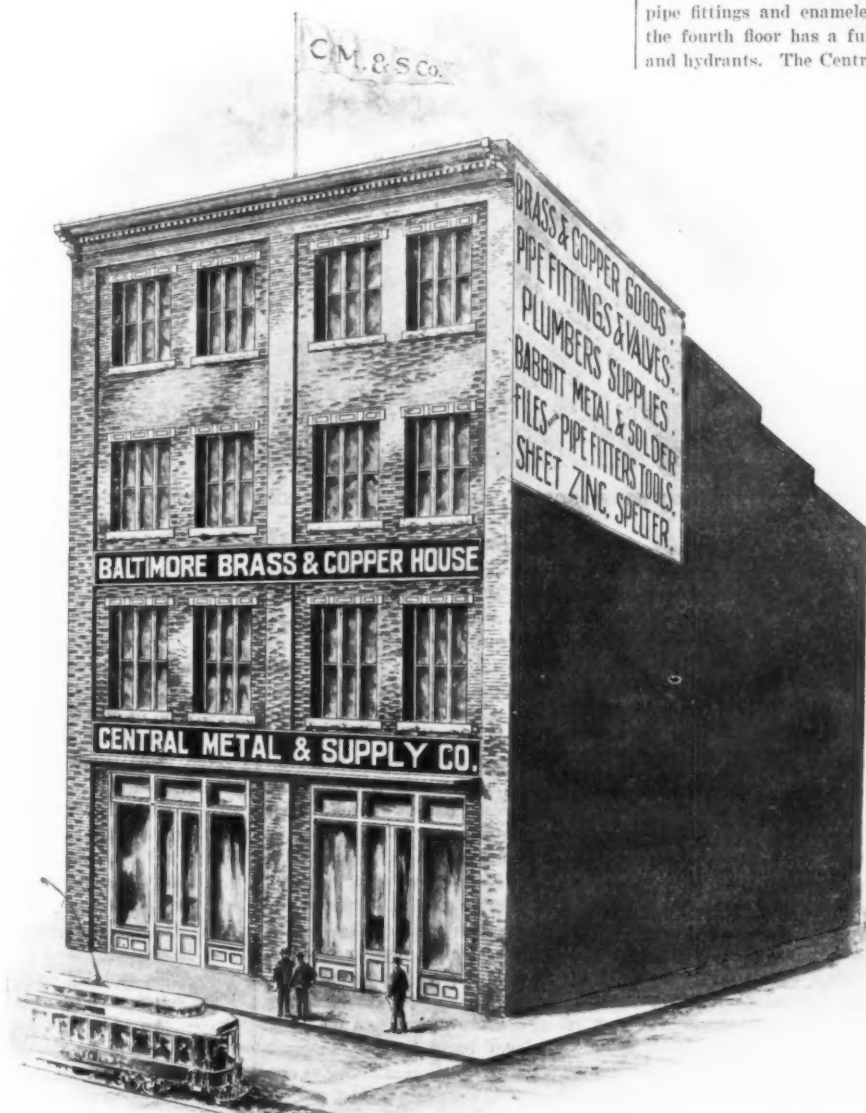
[Official announcement has been made of the consolidation of the Ingersoll-Sergeant and Rand Drill companies under the new name of Ingersoll-Rand Company. The union of these two houses, the oldest in their line of production in the world, brings together valuable patents and expert engineers of large experience. Improved machinery and even better service will result from this consolidation, and the arrangement should be advantageous to both purchaser and manufacturer. Beside the two factories at Easton, Pa., and Phillipsburg, N. J., noted in the preceding letter, the Rand interests bring to the new firm five additional shops—at Tarrytown, Ossining and Painted Post, New York; at 34th street, New York city, and at Sherwood, Quebec. All will continue to be operated under the careful and conservative system of management which has brought the company's products to their present position of recognized excellence.]

The Baltimore Belting Co.

When the Baltimore Belting Co. of Baltimore, Md., began business in 1901 it determined to make the best leather belting possible, using the highest grade of oak-bark-tanned leather, with skilled and expert beltmakers and with modern methods and systems. This policy was strictly followed, and, together with able management, it built up a large demand for the "Baltobelt" in an extensive territory. In making "Baltobelt" expert workmen are employed, and only the center stock of the choicest packer steer hides is used, tanned by the old-fashioned oak-bark process, resulting in the production of a belting that fulfills the requirements of the most exacting user. This belting is pliable, strong and tough. When used on the hardest

fire of February, 1904, and was one of more than a thousand buildings destroyed. The company immediately secured accommodations at 229 North Holliday street and provided facilities for manufacturing, so that buyers could obtain belting

duction. The new building is three stories high, 50 feet wide by 120 feet long. Stock-rooms and offices are on the first floor, factory department on the second floor, currying and finishing departments on the third floor and in the basement. An illustra-



HOME OF CENTRAL METAL & SUPPLY CO., BALTIMORE.

ply Co. has a very large and complete supply of iron pipe, and in addition to storing some in the main warehouse, has also two other warehouses—one in the rear of the main building, 18x60 feet, and the other on McElderry's wharf, 25x60 feet.

This company claims to be the only house south of Philadelphia which handles a full and complete stock of brass and copper goods, which can be sold at factory prices. It organized six years ago, and began in a small building, 20x90 feet, but the business grew so rapidly that the present warehouses were built. A number of salesmen of the company are traveling in Pennsylvania, Delaware, West Virginia and the South.

The Automatic Telephone System.

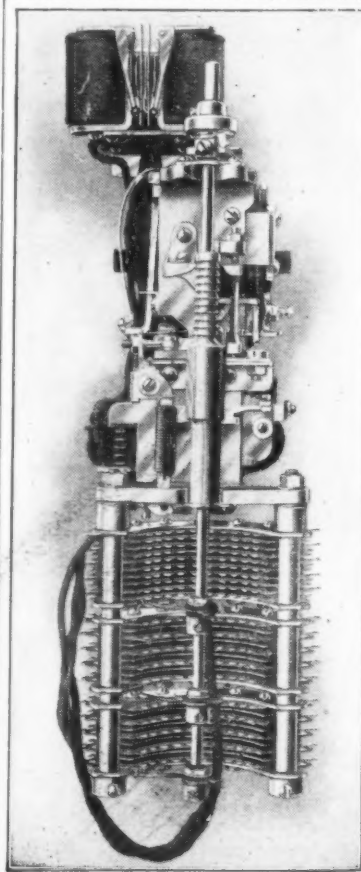
Most of the new ideas that find expression in the myriad devices performing their functions in various departments of industry affect the average man only indirectly, adding nothing to his comfort and effect-

more than 12 years since the first exchange was placed in commission by the Strowger company, and the original idea as conceived by A. B. Strowger, the first patentee, dates back to a time almost contemporaneous with the invention of the telephone itself. Its present high state of development represents 15 years of persistent industry and untiring effort directed toward the elimination of its imperfections and the overcoming of its limitations. It stands today a perfectly practicable institution, demonstrated to be such by tests of the most rigorous character, and one that, on account of the great advantages it offers and the economy of its operation, bids fair to revolutionize the telephone industry. Indeed, the transition has already begun in earnest, and today exchanges, varying in size from 25 to 10,000 lines, manufactured by the Automatic Electric Co. of Chicago under the Strowger patents, are scattered throughout the States, furnishing service to an aggregate of nearly 100,000 subscribers.

is restored to normal position by the action of a spring within. This operation is repeated for 4 and 2. It then remains only to press the black button underneath the dial to ring the bell on telephone number 542, the connection having been established as the result of the several operations of the dial. When conversation is completed disconnection is accomplished by the hanging up of the receiver, which act instantaneously clears the line and leaves it open for a second call if one is to be made. If the line called is busy a buzzing sound immediately occurs in the receiver of the calling 'phone to give notice that such is the case.

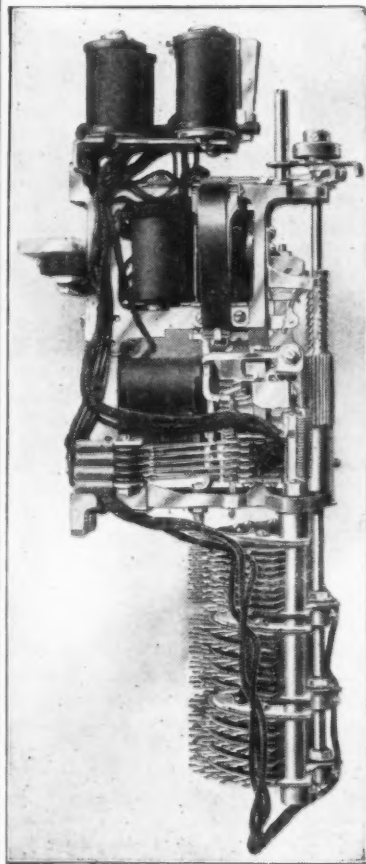
The keyboard or internal mechanism of the telephone measures 5x3x2 inches, and consists of an impulse sending device, which in response to the movements of the dial sends out across the line to the switchboard a succession of impulses corresponding in number to the number of the hole in which the subscriber's finger is placed, thus actuating the switches in

construction in view of the character of work it is called upon to perform. The upper half consists of a pair of relays and three pair of magnets mounted on a small cast-metal frame. These relays and mag-



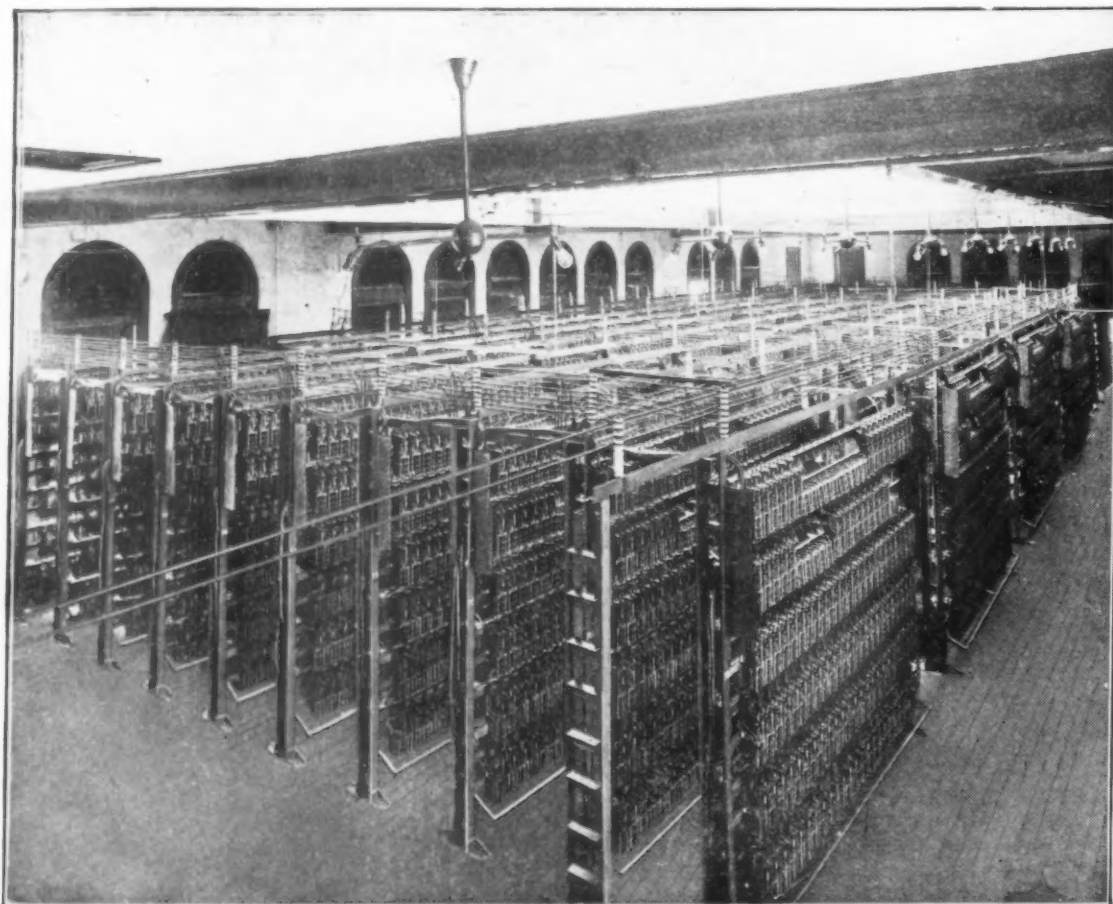
AUTOMATIC TELEPHONE SWITCH—FRONT VIEW.

nets, together with the necessary springs, armatures, etc., operate the shaft which occupies the central position in the switch, lifting and rotating it until the "wiping fingers" attached thereto are brought into



AUTOMATIC TELEPHONE SWITCH—SIDE VIEW.

connection with the brass contacts, which, arranged in three semicircular banks, constitute the lower half of the switch, releasing it when the call is completed. The upper of these banks referred to is the



THE AUTOMATIC TELEPHONE EXCHANGE OF THE HOME TELEPHONE CO., DAYTON, OHIO—6000 LINES.

ing no change in his daily operations. They are simply the results brought about by business conditions, which are ever demanding cheaper and better means of accomplishing the same results, and consequently do not cross his horizon nor excite his interest.

But there are few to whom the successful application of the automatic idea to telephone practice and the introduction of a system in which the operator, so long the ruling spirit of the central office, has been altogether banished from its precincts, does not come as a "consummation devoutly to be wished," not alone because of the more rapid service it offers, but because of the relief it brings from mistakes, delays, interruptions and other annoyances that the present manually-operated system is naturally heir to.

The Strowger automatic telephone system, styled by the humorist the "cussless, waitless, out-of-orderless, girlless telephone," in spite of the fact that until recently little was known about it, is by no means a new and untried creation. It is

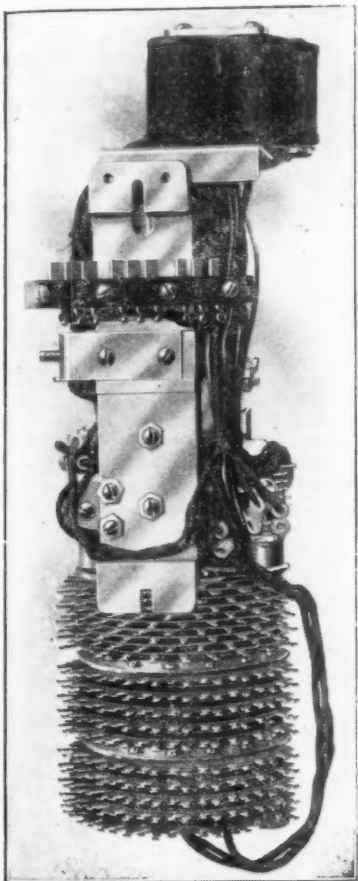
The apparatus which contains within itself such wonderful possibilities furnishes material for a most interesting study, and though an adequate comprehension of it can only be had by actual inspection, a general idea can be secured from an explanation of its construction and operation. The automatic telephone is, in the main, like the ordinary instrument, having the usual receiver, transmitter, bells, etc., adding outwardly only the calling dial, a circular metal disk about five inches in diameter, having on its periphery 10 finger holes numbered from 1 to 0. This dial is capable of rotation, being pivoted on an axis at its center, and its operation constitutes all that a subscriber is called upon to perform in selecting the number desired. Supposing the number 542 is to be called. The subscriber first removes the receiver from the hook, places his index finger in hole number 5 and turns the dial downward as far as possible—that is, to the stop provided to limit the distance through which it may be revolved. He then releases it and the dial

such a way as to properly establish the connection.

The apparatus in the central office which thus responds to the operations of the dial on the subscriber's instrument offers no resemblance to that which is so widely in use today. The accompanying illustration of the switchboard now being operated by the Home Telephone Co. of Dayton, Ohio, gives a very good idea of the appearance of a large working automatic exchange. The present capacity of this board is 6000 lines, but it is so designed that it can be increased to 19,000 lines without change in the present equipment by the mere addition of extra sections. The unit in the automatic exchange is an instrument about 13 inches high, 4 inches wide and 4½ inches deep, known as the selector switch. This switch constitutes the necessary equipment in the central office for the operation of one telephone, and is connected with the telephone assigned to it by means of a pair of wires, making what is generally known as a metallic circuit. It is extremely simple in

"busy bank," and simply serves to indicate busy lines in the automatic connection of trunks. The lower two are the line or trunk banks, to which the line wires connect and over which the conversation is held. The switches are mounted on iron shelves, 25 to the shelf, supported by iron standards.

As auxiliaries to the first selector switches there are so-called connector switches, the proportion of the latter being 10 to 100 of the former. The connectors are in construction and in method of operation the same as the selectors, and their function, as already suggested, is that of completing the work initiated by the selectors. These connector switches are arranged in independent groups, each group carrying the terminal of lines leading to 100 telephones, and each connector in the group having access to the entire 100 lines. These switches resemble in function the cord in the manual board, since they serve as links between the calling and called instruments. Each group of connectors is numbered to correspond with the hundred number of the lines it

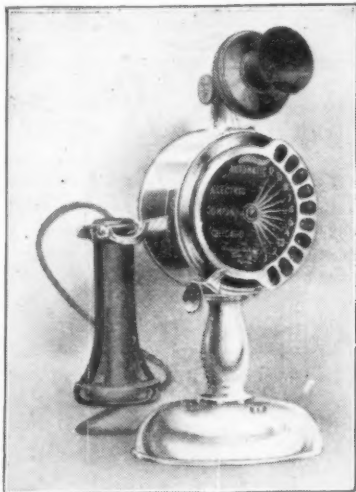


AUTOMATIC TELEPHONE EXCHANGE—REAR VIEW.

connects with. For instance, the sixth group has the terminals of lines leading out to lines numbering from 600 to 699, inclusive, and the third group from 300 to 399, inclusive.

The tracing out of a call from its origin in the telephone of the subscriber calling to its completion in the telephone of the subscriber called will not only be of interest, but will serve to indicate the functions of the different mechanisms employed and their interrelation in practice. The number 542, previously used in demonstrating the method of calling, will serve again. When the dial is pulled to 5, five impulses are communicated to the relay which controls the vertical magnets or the magnets which control the upward movement of the shaft and lift it five points. Following this an extra impulse is sent in, which energizes the relay in control of the rotary movements and the shaft is rotated until the "wiping fingers" attached to it close over and make contact with an idle trunk, when the rotary movement is arrested. The subscriber's line is now extended on

from his own selector switch to one of the 10 connector switches which constitute the fifth hundred group, and with which all the lines numbering from 500 to 600 are connected. The second movement of the dial calling 4, sends four impulses through the selector switch onto the connector and lifts its shaft to the fourth level, or the forty level, not affecting, however, the selector switch. The last movement of the dial causes the shaft to rotate two points and connects the line of the calling subscriber with the line leading out



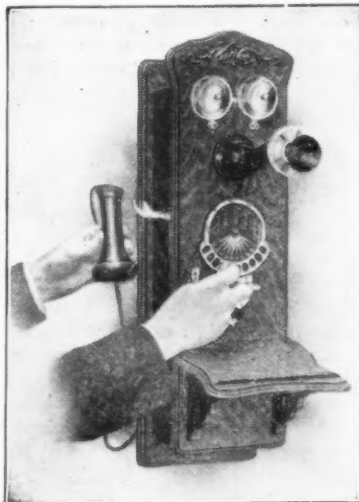
AUTOMATIC DESK TELEPHONE.

to the telephone number 542. The connection is now completed. The ringing is accomplished, as before indicated, by the pressing of the black button, the action of which is to throw the generator on the line of the called instrument and operate its ringer. When the receiver is hung up the release magnets in both switches engaged in the call are operated and both shafts are restored simultaneously. The lines of the calling and called telephones are thus cleared.

That is the order of operation in the

as that of the second selector, being that of an auxiliary to the first selectors in the process of selection. The secondary switches occupy the fifth and sixth shelves of the racks, the first four shelves, as before shown, being assigned to the selectors.

The advantages of the Automatic system are easily apparent, and have been partially suggested in what has already been said. Rapidity of operation, secrecy and accuracy of service and freedom from the frequent annoying delays and interrup-



AUTOMATIC WALL TELEPHONE—MAKING A CALL.

tions so common to present practice are the features which figure most prominently in measuring its value from the viewpoint of the subscriber, while to the owning companies, owing to the elimination of the operator, it means such a material reduction in expense of operation as to render it invaluable.

The automatic telephone system described has been adopted in Chicago, Ill.; Grand Rapids, Mich.; Columbus, Ohio; Lincoln, Neb.; Portland, Maine; Auburn,

Riverside, Cal.; Traverse City, Mich.; Hastings, Neb.; Wausau, Wis.; El Paso, Texas; Havana, Cuba; Marianao, Cuba; Berlin, Germany, and other cities.

The United States government has installed it in four of its arsenals, at the naval station in New Orleans, La., and at the Sandy Hook proving grounds, Fort Hancock, N. J.

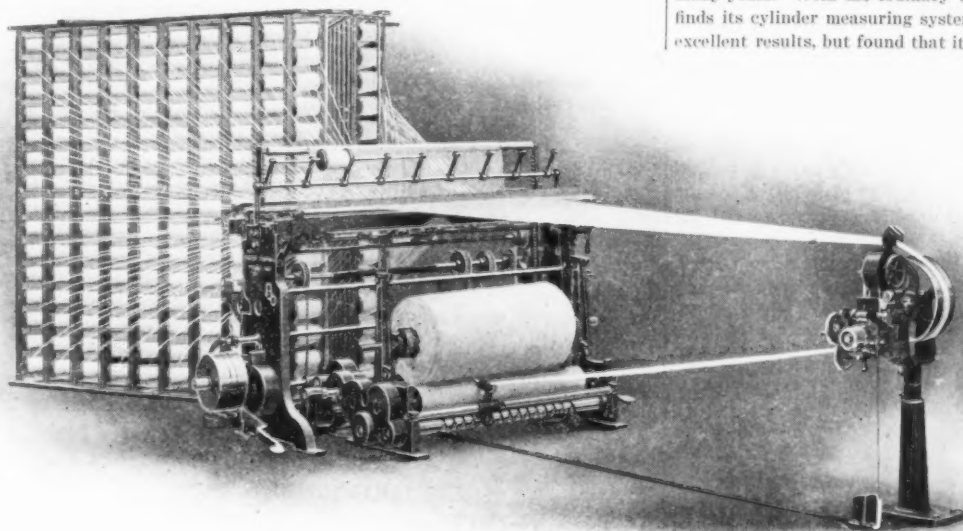
Draper's New Balling Machine.

The Draper Company of Hopedale, Mass., has recently made several quite important improvements in its balling machine, and has thoroughly tested them in actual practice before approving of the same as regular trade standards. There are various methods of making chain warps, some mills preferring to make chains containing a large number of ends, the majority, however, using chains with 500 ends or less. No one machine will suit both methods.

The Walcott warper is offered for chains over 500 ends, but the balling machine is recommended for a smaller number. In the second edition of the Draper catalogue, Textile Texts, the company heralded the advent of a four-ball warper which promised well, and the use of this style led to the present improvement. The object of the four-ball warper was to save in waste, as it was difficult to measure four balls on four different machines accurately enough so that all four would run out substantially alike. The company has accomplished the same result; that is, ensured the accurate measuring of the chain by a much simpler method, as it now measures direct from the pulley, and as the pulley is of large surface and has practically nothing to do except guide the chain and rotate the indicator, there is little or no liability for slip.

The accompanying illustration of the entire machine shows the whole apparatus, the ball being wound on the separate rolls, which give large frictional driving power, and also shows the stopping connection from the pulley back to the machine.

The problem of measuring accurately has engaged the company's attention for many years. With the ordinary warper it finds its cylinder measuring system giving excellent results, but found that it was not



DRAPER'S NEW BALLING MACHINE.

case of an exchange of not more than 1000 lines. In exchanges of the 10,000 type an intermediate switch, known as the second selector, is employed. The call, as before, originates in the selector, or, as it is known in this case, the first selector, passing then to the second selector and being completed in the connector. The percentage of second selectors to first selectors is the same as that of connectors, viz., 10. In exchanges of larger type, i. e., over 10,000, a third selector is added. The function of this tertiary switch is the same

N. Y.; Lewiston, Maine; Fall River, Mass.; New Bedford, Mass.; Los Angeles, Cal.; San Diego, Cal.; Hopkinsville, Ky.; Sioux City, Iowa; Cleburne, Texas; Columbus, Ga.; South Bend, Ind.; Aberdeen, S. D.; Miamisburg, Ohio; Auburn, Maine; Medford, Wis.; Dayton, Ohio; St. Marys, Ohio; Woodstock, N. B.; Westerlo, R. I.; Manchester, Iowa; Princeton, N. J.; Albuquerque, N. M.; Van Wert, Ohio; Battle Creek, Mich.; Clayton, Mo.; Pentwater, Mich.; Toronto Junction, Canada; Wilmington, Del.;

advisable to wind balls direct from the cylinder on the warper as formerly, especially since heavier balls have come into use. The Draper Company cautions customers about the use of yarn for either balling machines or warpers that is made into a heavy spool load, unless special pains are taken to ensure ease of rotation at the creel. Where a large number of heavy spools are used it requires a very appreciable pull to start them in rotation, and every possible means of lessening friction should be adopted.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Mississippi's Production.

The question of curtailing the lumber output in Mississippi during the fall months in order to maintain present prices is now confronting the lumber manufacturers of that State. The belief is current among many that there will be no decrease in the demand for lumber during the fall and winter months, thereby making a curtailment unnecessary. At the same time those who entertain this belief are citing the fact that the production was materially decreased during the early part of the year by unfavorable weather conditions. Others contend, however, that the present prices, which are very satisfactory, cannot be maintained if the mills continue running throughout the year at their full capacity, and strongly advise a curtailment. It is expected that this question, among others of importance, will be fully considered at the meeting of the Southern Lumber Manufacturers' Association, which is to be held in St. Louis on August 18, at which time the Mississippi lumber industry will be largely represented.

Galveston's Exports.

According to statistics prepared at the Galveston (Texas) custom-house, the value of total exports of lumber, logs, staves, shingles, etc., through the port of Galveston for the year ended June 30, 1905, amounted to \$2,485,274. In the Galveston district are included the ports of Texas City, Sabine Pass and Port Arthur, all of which contributed largely to the total of exports. Mexico, Germany, Netherlands and Belgium received most of the lumber sent through the Galveston district, while French South Africa, Portuguese South Africa and Panama each received shipments. Mexico furnished a good many logs that were exported, the shipments being handled through the Galveston port by American exporters. Large shipments of walnut came from Louisiana, East Texas and Missouri.

Wood-Preserving Plant.

The Percival Wood Preserving Co., offices at 107-108 Opera-House Building, Houston, Texas, has effected organization, with a capital stock of \$100,000, for the purpose of establishing a wood-preserving plant at Houston. A building 50x100 feet will be erected and equipped for a capacity of 100 barrels, the character of product being wood-preserving and teredo-proof compositions. Officers of the company are as follows: H. E. Percival, president; M. C. Percival, vice-president; W. G. Burchfield, secretary; J. D. Donaldson, treasurer. It was recently stated in this column that the company was to be organized. All equipment and supplies for the plant have not yet been purchased, and the company invites prices on barrels, 1, 5 and 10-gallon cans, liquid mixers, boilers and electric motors.

Tannic Extract Plant.

The Imperial Extract Co., Thomas Y. England, president; Charles S. Walton, vice-president; Charles S. Warren, secretary and treasurer, all of Philadelphia, Pa., has begun the erection of a tannic extract plant at Stokesville, Va. Its plant will occupy a site of 16 acres, and work of construction will be under the supervision of W. T. Buchanan. Six large frame buildings and a brick boiler-house will be erected, and with the equipment for the plant, which is designed to have a capacity of 50 barrels per day, will cost approximately \$65,000. It is ex-

pected to have the factory in operation by January 1, 1906.

Walnut-Log Plant.

A dispatch from Fort Smith, Ark., states that the United Walnut Log Co., composed of capitalists of Evansville, Salem and Wabash, Ind., has purchased six acres of land from the Fort Smith Wagon Co. at Fort Smith for the purpose of erecting a walnut-log plant. It is the purpose of the company to prepare walnut logs for export, expending about \$75,000 for the erection and equipment of the plant, which is expected to employ 75 men and send out three carloads of logs per day. The company has already closed contracts with Indian Territory parties for 3000 logs.

For a Shingle Mill.

The Beaumont Shingle & Lumber Co. of Beaumont, Texas, has been organized, with a capital stock of \$30,000, all of which has been paid in, and will begin the erection at once of a shingle mill on Brakes bayou, near Beaumont. Messrs. W. C. Gray, John N. Gilbert, George W. Carroll, T. S. Reed and E. C. Wiess are the directors of the company for the first year. W. C. Gray will be the manager. The company owns a supply of cypress timber sufficient to keep the mill in operation for several years.

Conditions Good.

It is announced from Jacksonville, Fla., that the yellow-pine lumber conditions continue good, with a good demand for lumber, and prices rising. On account of weather conditions during the past two weeks some of the mills have been retarded in their operations, but an improvement is noted at this time. The lumber industry is highly satisfactory all over the State, and mills are experiencing difficulty in filling orders placed with them some time ago.

To Develop Timber Lands.

The Germain & Boyd Lumber Co. of Saginaw, Mich., has purchased from William Edenborn, president of the Louisiana Railway & Navigation Co., 18,000 acres of timber lands at an approximate cost of \$340,000. The property is located in Winn parish, Louisiana, and will be immediately developed, as it is the intention of the purchasing company to erect a double band-saw mill and put it in operation at once.

Wants Lumber-Mill Location.

It is the intention of the Austell Improvement Co. of Austell, Ga., to rebuild its lumber mill, which was destroyed by fire last week. The company is desirous of obtaining a new location in some section where there are ample facilities for obtaining timber and making shipments. It may rebuild or possibly purchase an established plant which will enable it to fill its orders, many of which are now on file.

Building in Little Rock.

For the months of May and June and the first half of July the building-permit record of Little Rock, Ark., shows the value of building operations outside the fire limits to be \$242,469. Inside the fire limits the valuation is estimated at \$44,960. The total number of permits issued for the period was 173, the greater portion of the building activity being confined to the residential districts.

Timber Tract in Tennessee.

Messrs. John W. Davis, Austin Smith, Hugh Jarvis, Lee Stout and W. B. Maxwell, all of Clarksburg, W. Va., have organized a company and purchased a timber tract containing about 40,000 acres in

Southeastern Tennessee and in North Carolina. Negotiations were conducted by Austin Smith, and it is said that the purchase price approximates \$400,000.

Stave Mill and Dry-Kilns.

Construction work on the stave mill and dry-kilns which are being erected on Dunn's field, near Newbern, N. C., for the North Carolina Stave Co., is progressing rapidly. The walls of the kilns have been completed and the saw-mill is nearly enclosed. The plant is expected to have a capacity approximating 500,000 staves per week.

Lumber Notes.

Between \$150,000 and \$200,000 worth of buildings are in course of construction at Hickory, N. C.

The government has awarded contract to H. A. Rose of Paducah, Ky., to furnish lumber for the Rock Island (Ill.) arsenal. About 3,500,000 feet, nearly all of which is hardwood lumber, are used at the arsenal annually.

The Industrial Lumber Co. of Beaumont, Texas, up to the present time has shipped more than 6,500,000 feet of lumber. Col. Sam Park, president of the company, estimates that the total shipments for the month will exceed 10,000,000 feet.

Reports from Bristol, Fla., state that John A. Davis has purchased a 35-horsepower portable engine and boiler with a complete shingle-mill equipment, which he will erect in Liberty county, Florida. The plant will have a capacity of about 20,000 shingles per day.

It is announced in Beaumont, Texas, that orders have been received from Chicago and Mexico for lumber aggregating 10,000,000 feet. Purchasing agents from these territories have been endeavoring to buy the whole stock of the Industrial Lumber Co., as well as that of other mills.

To Erect Chemical Factory.

Dispatches from Annapolis, Md., state that J. Wilson Leakin of Baltimore, Md., has conveyed to Vincent M. Kearns 224 acres of land near Annapolis to be used as a site for the erection, probably within the next year, of a large chemical manufacturing plant. The property is located on the Severn river, and has a water-front of one-third of a mile. The United States government recently expended \$200,000 to deepen the bed of the river, and if the proposed plant is erected long piers will be constructed from the shore to deep water, enabling large ships to come in and load. It is said to be the intention of the promoters of the enterprise to manufacture chemicals largely for export. Mr. Brookes Sewell, an English chemist, is understood to be largely interested in the project.

The Southwestern Mining & Chemical Co. of Charlottesville, Va., has been incorporated, with a capital stock of \$500,000, for the purpose of operating plants for the manufacture of chemicals. Officers of the company are C. E. Hughes of Charlottesville, Va., president; Eldridge Turner of Charlottesville, Va., vice-president; John F. treasurer. This company controls property in Orange county, Virginia, near the Southern Railroad, which has proved by Sommers of Louisa, Va., secretary and test to contain large quantities of sulphur, pyrites, graphite and copper. Beside manufacturing fertilizers, it is intended also to manufacture a mineral graphite paint. A plant costing \$100,000, to have a daily capacity of 100 tons of fertilizer and 50 tons of graphite, will be erected.

The Grafton (W. Va.) Board of Trade has been organized with 70 members.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Trade With Cuba.

A. H. de Beche of F. H. de Beche & Co., 14 Obrapia, Havana, Cuba, writing from 54 Stone street, New York, care of W. H. Rader, to the MANUFACTURERS' RECORD, says:

"We are established as manufacturers' agents in Havana, and the writer is here in New York securing some new lines to represent there, and as freight is cheaper to Cuba from the South than from the North, we think we can do better to get the agency from manufacturers in the South than trying to get the agency from manufacturers up here in the North.

"From now on we truly believe the business in all the trades will grow between the United States and Cuba, due to the reciprocity treaty, which favors the American-made goods over the European-made. Of course, the treaty has been already in existence for some time, but the effects cannot be felt at once, and it takes some time to divert the trade from one country to another, as there is always interest that cannot be broken from one day to another, and which obliges the merchants to follow taking the goods from the old channels they are used to, sometimes for years, before they can break those connections and start new ones."

Wants Car Material.

The Mexican Car & Foundry Co., Avenida Juarez, No. 404, Mexico, D. F., says:

"We expect to be running full blast by the beginning of August, turning out several standard cars per day without including small cars and other classes of equipment. We are now open for bids on all classes of iron, steel and other equipment which we do not manufacture and which cannot be bought in this country."

Mechanical Loading and Trimming.

The Mechanical Loading and Trimming Corporation, which was chartered last week at Norfolk, Va., has effected a permanent organization with the following officers: President, W. H. Lumsden; vice-president, J. K. Waterman; secretary, C. G. Kiser, and treasurer, C. A. Turner. This company has purchased the patents of the Turner coal, grain, coke and ore mechanical trimming machine. This device is for the purpose of loading and trimming vessels, and a small model has worked successfully in actual practice. Contract has been awarded for the construction of a large machine, and when it has been demonstrated arrangements will be made to manufacture from 30 to 50 machines, and they will be put in operation. The company may decide later to build its own manufacturing plant. Its capital stock is \$200,000, of which there has been \$151,900 subscribed.

Mr. E. I. Reardon, secretary of the Sumter (S. C.) Chamber of Commerce, writes to the MANUFACTURERS' RECORD that he has been shown samples of a superior quality of fuller's earth taken from a bed 20 miles from Sumter, on the Atlantic Coast Line Railroad. The deposit, which averages 10 feet or more in thickness, is on a tract of land of 2000 acres. The deposit in some places projects above the surface of the earth and in others can be struck from two to four feet below the surface.

The Hancock (Md.) Board of Trade has been organized.

Construction Department

TO OUR READERS!

In order to understand and follow properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and more attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Dwellings.—W. H. Engel, builder, 1703 Lorman street, will erect for himself two stores and 18 dwellings at Monroe and Presbury streets; two stories, 14x55 feet; cost about \$20,000; Jacob F. Gerwig, architect, Hoffman Building, 11 East Lexington street.

Baltimore—Store Building.—J. C. C. Justis, 30 East Baltimore street, has awarded contract to C. C. Watts, 113 Hamilton street, for the construction of store building at southwest corner Baltimore and Light streets; three stories, 17x80.4 feet; brick with granite base and Indiana limestone trimmings; steel beams; tin roof; metal ceilings; metal frames and sashes; prismatic glass; electric wiring and fixtures, plumbing and heating systems not in contract; Tormey & Leach, architects, 323 North Charles street.

Baltimore—Dwellings.—Elizabeth Leaverton, 1926 East Baltimore street, has awarded contract to Charles B. Gerock, 101 East Pratt street extended, for the construction of six dwellings on Potomac and Hare streets; two stories, 14x40 feet; cost \$5000.

Baltimore—Dwellings.—Jos. Schamberger, 2120 East Baltimore street, will erect for himself 10 dwellings at 1 to 19 South Patuxent street; three stories, 15x58 feet; brick with stone trimmings; tin roofs; furnace-heating systems; cost about \$24,000.

Baltimore—Hotel.—A number of improvements will be made to the Stafford Hotel, Charles and Madison streets. New engines, refrigerating plant and elevators will be installed.

Baltimore—Carriage-house and Stable.—H. Carroll Brown, 403 North Charles street, will erect stable and carriage-house at Brooklandwood (near Baltimore) 37x150 feet, with two extensions each 24x65 feet; sanitary plumbing; electric wiring and fixtures; heating system; Darrach & Beekman, architects, 1133 Broadway, New York. John Waters, 23 East Centre street; Morrow Bros., 212 Clay

street, and Henry Smith & Sons Company, 116 South Regester street, are estimating on the work.

Baltimore—Dwellings.—Paca & Newbold, Equitable Building, Calvert and Fayette streets, has purchased two lots of ground, one on Hoffman street near Mine Bank line and the other on Falt avenue and 1st and 2d streets, and will erect 49 two-story dwellings on the sites to cost about \$70,000.

Baltimore—Warehouse.—Thomas L. Jones & Son, 410 West Saratoga street; Brady & Watters, 532 St. Paul street; Henry Smith & Sons Company, 116 South Regester street, and Morrow Bros., 212 Clay street, are estimating on construction of warehouse at 126 South Charles street for James G. Stanley, 1218 North Charles street; four stories; brick with stone trimmings; steel beams; electric wiring and fixtures; sanitary plumbing; heating system; elevator; bids to be in July 26; T. George Carroll, architect, Continental Building, Baltimore and Calvert streets.

Baltimore—Dwelling.—Louis J. Roth, Galtier Building, 109 North Charles street, has awarded contract to H. C. Shelley, 2224 Druid Hill avenue, for the construction of dwelling at Roland Park; 2½ stories; frame construction on stone foundation; cost about \$7000.

Baltimore—Dwellings.—John S. Bridges, 28 South Charles street, will erect 16 dwellings in Northwest Baltimore, to cost about \$20,000.

Baltimore—Parish-house.—St. Bartholomew's Protestant Episcopal Church, W. Page Dame, rector, 1125 West North avenue, has commissioned Paul Emmart, architect, 210 West Fayette street, to prepare plans and specifications for proposed three-story parish-house to be erected at northeast corner of McCulloh and Gold streets.

Baltimore—Apartment-house.—Trimble Bros., 227 St. Paul street, have commissioned Alfred H. Taylor, architect, Hanover Building, Hanover and Fayette streets, to prepare plans and specifications for an apartment-house to be located at southwest corner of Chase street and Guilford avenue. Plans will be sent out for estimates on construction in a few days.

Baltimore—Dwelling.—R. A. Wood of the American Luxfer Prism Co., American Building, Baltimore and South streets, will erect dwelling at Forrest Park; two stories with attic, 25x44 feet; frame construction on stone foundation; slate roof; electric wiring and fixtures; sanitary plumbing; heating system. Hodges & Anderson, architects, Wilson Building, 301 North Charles street. H. C. Shelley, 2224 Druid Hill avenue, is estimating on construction.

Baltimore—Store Buildings.—Coblens, Cahn & Co., Howard and Lexington streets, has awarded contract to Morrow Bros., 212 Clay street, for alterations and additions to store building at Howard and Lexington streets, to cost about \$4000.

Baltimore—Store Buildings.—Hamilton G. Fant, secretary of the C. D. Kenny Company, southwest corner of Lexington and Greene streets, has commissioned Tormey & Leach, architects, 323 North Charles street, to prepare plans and specifications for three store buildings to be located at 531, 533 and 535 North Howard street; three stories high, 65x100 feet; ornate fronts; electric wiring and fixtures; sanitary plumbing; heating systems.

Baltimore—Dwellings.—The Baltimore Sand & Contracting Co., Lobe Building, 15 South Gay street, will erect five three-story dwellings on McCulloh near Gold street, to cost about 12,000.

Baltimore—Warehouse.—C. W. Abbott & Co., 206 South Charles street, will erect warehouse at 17 South Charles street; five stories, 20.2x168 feet; brick with granite base and galvanized-iron trimmings; steel beams; slag roof; metal frames and sashes; sanitary plumbing; elevator; electric work and heating not in contract. Henry S. Rippel, 7 Clay street, and James F. Farley, 207 North street, are estimating on construction; bids to be in August 2.

Baltimore—Store Building.—Henry S. Rippel, 7 Clay street; Thomas B. Stanfield & Son, 109 Clay street, and Willis & Mason, 22 East Lexington street, are among those estimating on alterations and additions to be made to store building at 37 West Lexington street for Wm. A. Flamm, 126 North Calhoun street; addition to be two stories high with basement, 20x46 feet; steel beams; slag roof; metal ceiling; electric wiring and fixtures; sanitary plumbing; heating system;

dumbwaiter; Alfred Mason, 746 West Baltimore street, architect; bids to be in July 29.

Baltimore—Store Building.—Hochschild, Kohn & Co., northwest corner Howard and Lexington streets, have purchased lot at 208 North Howard street and will erect five-story addition to their present building. Architect has not at yet been selected.

Baltimore—Department House.—Stewart & Co., northeast corner Howard and Lexington streets, will expend about \$50,000 in alterations and repairs and the installation of new fixtures in its store building.

Baltimore—Dwellings.—John Cowan, 106 West Madison street; B. F. Bennett, 123 South Howard street; G. T. Reid, Leonard F. Fowler, 602 West Saratoga street; W. E. Burnham, Builders' Exchange Building, 2 East Lexington street; H. S. Rippel, 7 Clay street; H. C. Shelley, 2224 Druid Hill avenue, all of Baltimore, and Israel Owings of Mt. Washington, Md., are estimating on construction of two dwellings at West Arlington for David and Joseph Hechinger, 808 Low street; two and one-half stories high; frame construction on stone foundation; electric wiring and fixtures; sanitary plumbing; heating system; Louis Levi, architect, Union Trust Building, Charles and Fayette streets; bids to be in August 3.

Manufacturing Buildings and Other Enterprises.

Baltimore—Power-house.—Henry Sonneborn & Co., manufacturers of clothing, Eutaw and German streets, have purchased lots at 512, 514 and 516 King street and will erect power-house on the site, which is 40x75 feet, to be used in connection with large factory to be erected at corner of Lombard and Paca streets. Architects have not as yet been selected.

Baltimore—Brewery.—The Mount Vernon Brewing Co. has been incorporated with a capital stock of \$250,000, and will operate brewery plant at Ridgely, Scott and South Paca streets. The buildings on the site will be altered and repaired and a number of new buildings will be erected, including bottling plant and an ice plant with a capacity of 35 tons per day. The plant will have a capacity of 100,000 barrels of beer a year, and will be equipped with the latest-improved machinery.

Baltimore—Wagon Factory.—James King & Co., wagon builders, 810 East Fayette street, has awarded contract to Wm. G. Knauf, 401 New street, for the construction of factory building at 814 East Fayette street; three stories, 25x51 feet; cost about \$4000.

Baltimore—Manufacturing.—The Monarch Manufacturing Co. has been incorporated with an authorized capital stock of \$25,000 by Thomas C. Hoenes and Edward T. Pepper, both of the Crescent Manufacturing Co., 206 West Fayette street, and Charles B. Eyer, Hamilton, Md.

Baltimore—Picture-frame and Moulding Factory.—Nathan Hirschberg & Son, manufacturers of picture frames and mouldings, 215 West Pratt street, have received estimates on construction of factory on Bush street; two stories, 60x200 feet. A power-house and office building will also be constructed; cost of buildings about \$50,000.

Baltimore—Distillery.—The Monumental Fruit Distilling Co. has been incorporated, with an authorized capital stock of \$3000, to distill brandy from various fruits, by Abraham Bronstein, 806 East Fayette street; Max Bronstein, 806 East Fayette street; Martin Miller, Barnett Weinstein, 215 South Exeter street, and Michael Asbell.

Baltimore—Electric Power-house.—J. H. Miller, 110 Dover street; Baltimore Ferro-Concrete Co., Calvert Building, St. Paul and Fayette streets; Charles Gilpin, Union Trust Building, Charles and Fayette streets; Hennebique Construction Co., 227 St. Paul street; H. S. Rippel, 7 Clay street; Brady & Watters, 532 St. Paul street; Armstrong & Latta, Light and Lee streets; George A. Fuller Company, American Building, Baltimore and South streets; D. W. & G. H. Thomas, Vickers Building, German near South street; Steel Concrete Construction Co., 400 St. Paul street; Cramp & Co., Hanover Building, Fayette and Hanover streets, all of Baltimore, Md., and Edwin Gilbert & Co., Land Title Building, and Merritt & Co., 1024 Ridge avenue, both of Philadelphia, Pa., are estimating on electric power-house to be constructed at Westport for the Consolidated Gas, Electric Light & Power Co., Continental Building, Baltimore and Calvert streets; one story and basement with two galleries, 110x255.2 feet; reinforced concrete construction throughout;

foundation on piling; slag roof; metal frames and sashes; five skylights; mechanical equipment, smokestack and sidewalks not in contract; Simonson & Pietsch, architects, American Building, Baltimore and South streets; P. O. Keilholz, consulting engineer, Continental Building, Baltimore and Calvert streets; bids to be in August 8.

Baltimore—Sea Food.—The Chesapeake Bay Crab & Oyster Co. has been incorporated, with an authorized capital stock of \$1000, to deal in fish, crabs and oysters, by Charles H. Lighthiser, 606 William street; George Gaubatz, Jr., 17 Mt. Olivet lane; Alexander Dall, George Debrick and Albert M. Sproesser, 17 East Saratoga street.

Baltimore—Mercantile.—The Wah Me Lee Hing Co. has been incorporated, with an authorized capital stock of \$100,000, to deal in general merchandise and conduct a building and contracting business, by Mark Rigor, 1008 Concord avenue; David F. Penington, 100 North Paca street; Wm. A. Renahan, 614 North Arlington avenue, and Walter P. Chenoweth, 232 North Howard street, all of Baltimore, Md., and Wm. A. Pate of Washington, D. C.

Baltimore—Abattoir.—Greenwald Bros., Claremont Hotel, Claremont, Md. (a suburb of Baltimore), will erect large abattoir at Claremont. The plans provide for six buildings, which will be equipped with all modern facilities for the conduct of the business. Starr Engineering Co., 258 Broadway, New York, engineers, are preparing the plans and specifications for the buildings. Estimates are now being obtained from H. S. Rippel, 7 Clay street, and Richmond H. Ford & Co., Equitable Building, Calvert and Fayette streets, for excavations for the buildings.

Baltimore—Real Estate.—The Cheston Land Co. has been incorporated, with an authorized capital stock of \$10,000, to deal in lands, by Alfred S. Niles, 318 North Charles street; J. Hurst Purnell, 1018 St. Paul street; Elwin J. Curry, Frank H. Phelps, Fidelity Building, Charles and Lexington streets, and John J. Watson.

Baltimore—Bottling Plant.—Frederick Suero, 359 North street, will erect bottling plant on North street near Pleasant street; three stories, 20x66 feet; brick with stone trimmings; steel beams; metal frames and sashes; slag roof; sanitary plumbing. Electric wiring and fixtures, heating system and elevator not in contract. D. E. O. Kubitz, 1904 North Washington street, architect. Estimates on construction have been submitted.

Subbids Wanted.

Mention of contractors wanting subbids on construction work and material will be found, when published, in the "Machinery Wanted" column on another page under the heading of "Building Equipment and Supplies."

ALABAMA.

Anniston—Mercantile.—L. H. Kaplan and associates are organizing \$50,000 mercantile company.

Autaugaville—Lumber Plant.—The White-water Lumber Co., reported incorporated last week, will erect saw-mill 32x120 feet, capacity 30,000 feet; planing mill 30x50 feet, and two dry-kilns 9x36 feet, capacity 20,000 feet. Long and short leaf yellow pine will be manufactured. S. D. Dantzier is architect. This company was previously reported as having absorbed the Kingston (Ala.) Mill Co.'s plant, which will be removed to Autaugaville and operated; capital stock \$25,000.

Birmingham—Gas Fixtures.—Home Gas Lighting Co. has been incorporated with \$4800 capital stock to manufacture gas fixtures. John P. Evans is president; George W. Fallin, vice-president and general manager; Leonard Fallin, secretary, and John Woodrow, treasurer.

Birmingham—Iron-pipe Works.—E. L. Luthicum of Anniston, Ala., general manager of the American Cast Iron Pipe Co., recently organized at Atlanta, Ga., for the manufacture of gas and water pipe from four inches to 30 inches, is investigating sites for the location of plant; capacity to be 150 tons of pipe daily. About \$225,000 will be expended. A company was reported last month under Atlanta, Ga., to be organized by James W. Blair, 716 Prudential Building; E. L. Douglas, John J. Egan and associates for the manufacture of pipe, and Mr. Luthicum was mentioned as manager.

Brundidge—Live-stock Company.—Incorporated: The Ramage Live-Stock Co., with \$15,000 capital stock, by J. T. Ramage, A. G. Seay, E. M. Hightower and others.

Coleman—Coal-mining.—The Blocton-Cahaba Coal Co., reported last week as to install electrical equipment at its mines at a cost of about \$20,000, will erect a 175-kilowatt pumping plant. Contracts have all been let; offices, Birmingham, Ala.

Columbiana—Cotton Gin and Grist Mill.—It is reported that Robert A. O'Hara has purchased, will enlarge and operate the cotton gin and grist mill of H. M. Milstead.

Gadsden—Water-works, Sewerage and Street-paving.—City has voted affirmatively the \$100,000 bond issue previously reported for water-works, sewerage and street-paving. Address The Mayor.

Mobile—Ditching Machine.—G. W. Bashaw, Benjamin Bowman, A. N. Bullitt and F. E. Delvey have incorporated the Pneumatic Ditching Machine Co. with \$2000 capital stock to manufacture pneumatic ditching machines for all uses.

Mobile—Furniture Company.—Walker Furniture Co. has been incorporated with \$10,000 capital stock by H. S. Walker, J. M. Roan and R. B. Fothergill.

Tuscaloosa—Coal Mines.—A. S. Vandegraaff, J. W. Miller and associates are organizing company for the development of 3000 acres of coal land near Tuscaloosa.

Tuscaloosa—Sewerage System.—It is reported that W. A. McCalla & Co. are lowest bidders at \$8190 for the construction of proposed pipe sewers.

ARKANSAS.

Camden—Mining and Concentrating Company.—The Sound Currency Mining & Concentrating Co. has been incorporated with \$15,000 capital stock by Henry W. Myar, Joe Duellen, W. N. Ketchum, O. C. Reeves, Ed Harper and associates.

Dell—Cooperage.—Incorporated: The Big Lake Cooperage Co., with \$12,000 capital stock. B. W. Cowan is president; W. A. Williams, vice-president, and C. M. Cowan, secretary-treasurer.

Fort Smith—Walnut-log Plant.—It is reported that the United Walnut Log Co., composed of residents of Evansville, Salem and Wabash, Ind., has purchased six acres of ground on which to locate plant to prepare walnut logs for export. About \$75,000 will be expended and the daily capacity will be three carloads.

Fort Smith—Realty Company.—Incorporated: The O'Hara-Pendergrass Realty Co., with an authorized capital stock of \$100,000, and H. C. O'Hara, president; George W. Pendergrass, vice-president, and E. E. Pendergrass, secretary-treasurer.

Hot Springs—Ice Factory.—It is proposed to organize a company with \$100,000 capital stock to erect and operate an ice factory, and W. T. Hamilton is promoting the enterprise.

Huttig—Farm and Dairy Company.—The Union County Farm & Dairy Co. has been organized with P. M. Seaman, president; Patrick McNally, vice-president; John W. Chandler, secretary-treasurer, and A. E. Culbreath, general manager. The company has secured 200 acres of land for farm and dairy purposes.

Little Rock—Flour Mill.—R. T. Brook of Yellville, Ark., it is reported, contemplates establishing flour mill with a daily capacity of 200 barrels, which will later be increased to 500 barrels.

Little Rock—Mercantile.—Dunn & Powell have increased capital stock from \$12,000 to \$30,000.

Little Rock—Pottery.—The Mountain Valley Pottery Co. has been organized with R. E. Bradford, Century Building, St. Louis, Mo., president, to erect and operate pottery. This company recently purchased a mountain of kaolin near Little Rock.

Luxora—Electric-light Plant.—The Luxora Water & Light Co., C. B. Wood, president, and Wm. Wood, general manager, will erect building, 38x40 feet, and equip for a capacity of 600 lights. About \$4000 will be invested. Messrs. Wm. and C. B. Wood were reported last week as having secured franchise to construct and operate electric-light plant.

Stamps—Naval Stores.—The Catawba Naval Stores Co. has incorporated with \$50,000 capital stock. J. A. Buchanan is president; W. C. Brown, vice-president, and R. L. Pritchard, secretary-treasurer.

Texarkana.—The Texarkana Mercantile Co. has incorporated with \$10,000 capital stock. Gus Oppenheimer is president; W. J. Mansfield, vice-president, and E. M. Newton, secretary-treasurer.

DISTRICT OF COLUMBIA.

Washington—Dairy Company.—The Belmont Dairy Co. has been incorporated with \$25,000 capital stock by Edward P. Thomas, R. Bentley Thomas, E. Clifton Thomas and associates.

FLORIDA.

Bristol—Shingle Mill.—It is reported that John A. Davis and associates will establish shingle mill with a daily capacity of 20,000 shingles. Machinery has been purchased.

Crystal River—Hardwood Factory.—S. H. Kelsey & Co. are reported to establish plant for the manufacture of hardwood lumber, veneer, etc.

Dowling (P. O. Live Oak)—Lumber and Naval-stores Company.—The Dowling Lumber & Naval Stores Co. has been incorporated with \$2,000,000 capital stock. Thomas Dowling is president; R. L. Dowling, vice-president; O. D. McFarland, secretary, and F. M. Dowling, treasurer.

Fort White—Cotton Gin.—The Fort White Ginning Co. has incorporated with \$5000 capital stock to operate a cotton gin. J. W. Chiles is president; M. F. Lord, vice-president; E. G. Persons, secretary, and R. L. Sparkman, treasurer.

Live Oak—Sash and Door Factory.—The Live Oak Sash & Door Co. has been incorporated with \$25,000 capital stock by J. S. Roof, H. H. Hair, R. E. McNeil and J. W. Register to manufacture sash, doors, etc. Work on the erection of buildings will begin at once.

Live Oak—Hardware Company.—J. S. Roof, H. H. Hair, R. E. McNeil and J. W. Register have incorporated the Suwannee Hardware Co. with \$25,000 capital stock.

Punta Gorda—Cigar Factory.—The Punta Gorda Cigar Manufacturing Co. has been organized with \$5000 capital stock and C. G. Davis, president; George T. Brown, vice-president; M. V. Williams, secretary-treasurer, for the establishment of cigar factory referred to last week.

St. Petersburg—Real Estate.—The Bay Shore Land Co. has been incorporated with \$50,000 capital stock by A. E. Hoxie, Frank W. Ward, C. Percy Snell and others.

West Palm Beach—Furniture and Hardware Company.—Incorporated: Southern Furniture & Hardware Co., with \$5000 capital stock.

GEORGIA.

Atlanta—Water-works Improvement.—City is considering the issuance of \$500,000 of bonds for improving water-works system. Address Mayor Woodward.

Augusta—Engineering Company.—The Georgia Engineering Co. has been incorporated with \$10,000 capital stock by D. F. Jack, F. B. Pope, F. R. Clark and C. E. Clark.

Augusta—Grain Elevator and Warehouse.—The grain elevator and warehouse to be erected by F. C. Meyer & Co., for which contract was reported last week as having been let, will be 88x154 feet, one and two stories, and cost \$10,000; E. H. Mobley, engineer in charge. The company deals in hay, grain and building materials, manufactures special foods for cattle, stock and poultry; office, Calhoun street.

Auraria—Gold Mining.—George A. Neal of Kansas City, Mo.; Henry A. Buell of Aurora, Mo., and John A. Taylor of Gridley, Ill., have incorporated the Mountain Valley Mining Co. with \$500,000 capital stock to mine gold.

Austell—Lumber Mill.—Austell Improvement Co. will resume operating lumber mill reported burned last week as soon as site can be secured.

Calhoun—Electric-light Plant.—George C. Chambers is reported as having applied for franchise to install electric-light plant.

Columbus—Cigar Factory.—It is reported that M. Heimerwhite of New York, N. Y., will establish plant for the manufacture of cigars.

Columbus—Knitting Mill.—The Georgia Manufacturing Co. will build a structure two stories high, 46x140 feet, into which will be removed its present mill equipment of 2500 spindles and 153 knitting machines. Present buildings will then be used for dyehouse and warehouse.

Folkston—Furniture Factory.—It is reported that Charles Hubbard Sons of Philadelphia, Pa., will establish furniture factory.

Fort Gaines—Water-works and Electric-light Plant.—The Interstate Water-works & Construction Co. of Washington, D. C., it is reported, has secured 50-year franchise for water-works and electric-light plant, and the work of installing plants will begin at once.

Griffin—Cotton Mill.—J. J. Mangham, Douglas Boyd and others have incorporated the Central Cotton Mills and will establish plant of 125 looms for manufacturing high-grade cloth. A suitable building has been purchased and the machinery has been ordered. The company's capital stock is \$100,000.

Kingsland—Carriage Factory and Novelty Works.—A. E. Wells will erect a carriage factory and variety works.*

Lagrange—Electric-light and Power Plant. Bids will be asked in about 30 days by the Electric Light Commission for the construction of electric-light and power plant, for which Ludwig & Co., consulting engineers, Atlanta, Ga., were reported last week as preparing plans. About \$25,000 will be invested. Roy Dallas is city engineer.

Montezuma—Planing Mill.—Hill Williamson & Co. will establish planing mill.

Rutledge—Warehouse and Supply Company. Incorporated: The Rutledge Warehouse & Supply Co., with \$20,000 capital stock.

Rutledge—Mercantile.—Davis Mercantile & Supply Co. has been incorporated with \$10,000 capital stock.

Savannah—Car Works.—The South Atlantic Car Manufacturing Co. of Waycross, Ga., it is reported, has purchased the plant of the Georgia Car & Manufacturing Co., and will arrange at once for equipping and operating it. This plant was recently mentioned as purchased by E. B. Leaf & Co. of Philadelphia, from whom the present purchase was made.

Thomasville—Sand-lime-brick Plant.—It is proposed to establish plant for the manufacture of sand-lime brick, and J. H. Merrill can give information.*

Washington—Cotton Gin.—F. B. Pope of Augusta, Ga., will remodel building and equip as cotton gin. About \$3000 will be invested. W. T. Fluker will supervise the construction.

Watkinsville—Cotton Mill.—It is proposed to organize a company to build a cotton mill, and the capital stock will be \$100,000. The amount of \$50,000 has been subscribed, and outside capitalists are invited to furnish a like amount. N. W. Ashford & Sons can be addressed for information.

Yatesville—Cotton Gin.—The Yatesville Union Gin Co. has been incorporated with \$2000 capital stock by G. C. Hammons, R. L. Boyt, J. L. Reynolds, B. R. Chambers, J. F. Herndon and associates to operate a cotton gin.

KENTUCKY.

Bonnieville—Tripoli Mines.—H. F. Head has located a bed of tripoli, and will probably arrange for its development.*

Louisville—Brewery.—The Falls City Brewing Co., previously reported incorporated with \$300,000 capital stock to operate brewery, has purchased site on which to erect plant at a cost of \$250,000.

Louisville—Coal Company.—Incorporated: William H. Slaughter, Jr., Coal Co., with \$10,000 capital stock, by W. H. Slaughter, Jr., Helen Israel, S. T. Slaughter and W. H. Semoun.

Louisville—Viaduct.—The city will vote in November on the issuance of \$7,000 of bonds for paying half on viaduct to be built across Ayers alley. Address The Mayor.

Middlesboro—Coal-mining.—Eugene Vowels and J. D. Wills, it is reported, have purchased 500 acres of coal land near Middlesboro and will organize company with \$20,000 capital stock for the development of the tract.

Newport—Gas Plant.—Ben Bramlage, Harvey Meyers and James Young have secured franchise for furnishing the city with gas (previously referred to).

Owensboro—Saddle and Harness Factory.—The John G. Delker & Sons Co. has been organized with \$75,000 capital stock to manufacture harness, saddles and collars. John G. Delker is president; P. S. Wood, vice-president, and W. G. Barret, manager. Contracts have all been let. Mr. Delker was previously reported as organizing company to manufacture harness and saddles.

Owensboro—Lodge Building.—C. H. Hugger, chairman building committee, will receive bids until August 1 for the erection of building for B. P. O. E. after plans by A. Killiam, architect; to be of brick with copper cornice and balustrade, concrete and mosaic floor, also for heating, plumbing and electric wiring. Bids will be received for entire work or in parts.

Paducah—Rubber-grip Handle.—The Rubber Grip Handle Co. has been incorporated with \$20,000 capital stock by J. W. Fowler, S. E. Foreman, C. L. Brake, A. R. Givens, S. B. Hughes and associates to manufacture a rubber-grip handle patented by Mr. Foreman.

Paducah—Gas-plant Improvements.—The Stone & Webster Company of Boston, Mass., has taken an option on the Paducah Gas & Fuel Co., the Paducah Heating Co. and the Paducah City Railway Co. If the purchase is completed, it is the intention of the new management to expend from \$300,000 to \$400,000 on extensions of the gas mains and for other improvements.

Pikesville—Grocery Company.—The Pikesville Grocery Co. has been incorporated with

\$50,000 capital stock by J. B. Andrews, C. C. Huff and J. M. Morris.

Russell—Electric-light Plant.—E. E. Fullerton of Greenup, Ky., will erect 1200-light electric plant. About \$5000 will be invested.*

LOUISIANA.

Baton Rouge—Realty Company.—The Baton Rouge Realty Co. has been incorporated with \$100,000 capital stock. Joe Gottlieb is president; H. L. Puckett, vice-president, and Ben R. Mayer, secretary-treasurer.

Crowley—Grain and Feed Company.—Incorporated: Brooks & Clark, Ltd., with G. B. Brooks, president; W. E. Ellis, vice-president, and L. H. Clark, secretary-treasurer; capital stock \$35,000.

Hammond—Water-works.—City is completing arrangements for the construction of water-works for which C. H. Jenks, Fayette, Miss., was previously reported as engineer in charge. About \$30,000 is available. Bids for the construction will be received until August 8. Address James B. Adams, town clerk.*

Lake Providence—Real Estate.—E. J. Hamley & Son of Lake Providence and C. M. Lawrence & Co. of Vicksburg, Miss., have consolidated and organized as the Alluvial Lands Co. with \$20,000 capital stock and R. L. Crook, president; E. J. Hamley, vice-president, and J. Martlan Hamley, secretary-treasurer.

Natchitoches—Electric-light-plant Improvements.—City is contemplating making additions to electric-light plant at an expenditure of several thousand dollars, and bids for the work are being received. Address The Mayor.

New Orleans—Realty Company.—The New Orleans & Pontchartrain Realty Co. has been incorporated with \$1,000,000 capital stock by Robert Gwynne, Jr., of Salem, N. J.; E. Cooper Shapley, Ernest E. Conrad of Philadelphia, Pa.

New Orleans—Gas-saving Device.—Paul Reiss has invented a device for saving gas in domestic use, and the Standard Development Co. has been incorporated with \$100,000 capital stock and Charles Rainey, vice-president, for its manufacture. It is proposed to let contract for the manufacture of device for the present, but later a plant will be established.

New Orleans—Gasholder.—It is reported that the New Orleans Lighting Co. is considering the erection of another gasholder with a capacity of about 2,000,000 feet. T. D. Miller is general manager.

Opelousas—Lumber Company.—The St. Landry Lumber Co., Ltd., has incorporated with \$10,000 capital stock. Louis Rogers of Opelousas is president; Benjamin F. Tucker of Weaubleau, Mo., vice-president, and Oscar Leonard Gregory of Opelousas, secretary-treasurer.

Picayune—Saw-mill.—It is reported that Pittsburg (Pa.) capitalists have purchased one-half interest in the saw-mill of J. H. Stevens, and the mill will be remodeled and the capacity doubled.

Shreveport—Gas, Electric-light and Power Plant.—It is reported that the Shreveport Gas, Electric & Power Co. has completed arrangements for an additional \$500,000 bond issue, a portion of which will be used for extensive additions and improvements to plant within the next few years.

Winn County—Saw-mill.—It is reported that the Germain & Boyd Lumber Co. of Saginaw, Mich., have purchased 18,000 acres of timber land in Winn parish at a cost of \$340,000 and will begin at once the erection of double hand-saw mill.

MARYLAND.

Annapolis—Electric-light and Power Plant, etc.—Maryland Heat, Light & Power Co., previously reported incorporated with \$20,000 capital stock, will furnish electricity for heat, light and power in Anne Arundel county and steam for heating in Annapolis. It is also proposed to install and operate an automobile transportation system between Annapolis and adjacent towns. A building 40x100 feet will be erected. Architect has not been selected. Howard E. Crook is president; Thomas T. Boswell, vice-president; Wm. H. Moss, treasurer, and Andrew Westervelt, secretary and manager; temporary office, 329 West Mulberry street, Baltimore, Md.*

Cumberland—Rail Mill.—It is reported that the Maryland Rail Co. will rebuild that portion of its plant reported damaged by explosion.

MISSISSIPPI.

Braxton—Telephone System.—The Braxton Telephone Co. has been incorporated with \$15,000 capital stock by J. H. Gibson, L. D. Spell and others.

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Corinth—Sewerage System.—The W. M. Leftwich Company of Nashville, Tenn., has contract to construct seven miles of sewerage, previously reported.

Gulfport—Ice and Cold-storage Plant.—The Kelly-Jones Ice and Cold Storage Co. is the title of company previously reported to be organized with \$25,000 capital stock to operate ice and cold-storage plant; daily capacity 36 tons. J. R. Kelly is president; T. L. Jones, secretary-treasurer; H. C. Summerall, Jackson, Miss., engineer in charge, and H. C. Black, Gulfport, architect.*

Heidelberg—Cotton Gin.—Lyon Bros., it is reported, have begun the erection of proposed cotton gin. About \$5000 will be expended.

Hickory—Cotton Gin, etc.—A. H. George, E. Cahn, O. Hopkins and others have incorporated the Hickory Ginning & Manufacturing Co. with \$7000 capital stock.

Meridian—Street Paving.—The city, it is reported, has awarded contract to the Jefferson Contracting Co. of Birmingham, Ala., at \$7,738.38 for sidewalk paving.

Pontotoc—Electric-light Plant.—The city has voted affirmatively the proposed issuance of bonds for the erection and operation of electric-light plant. Address The Mayor.

MISSOURI.

Fayette—Water-works.—City has voted affirmatively the proposed \$40,000 bond issue for the construction of water-works. Address The Mayor.

Hannibal—Railroad Repair Shops.—The Missouri, Kansas & Texas Railroad, it is reported, will erect shops having about 1000 feet of floor space; building to have concrete floors and be heated by steam. It is stated that an electric-light plant will be installed. S. B. Fisher, St. Louis, Mo., is chief engineer.

Neck City—Zinc Mines.—It is reported that J. H. Schlund and R. M. Padgett of Chicago, Ill., have purchased at \$50,000 the Chapman & Lennan mine, concentrating plant, etc., and will operate same.

Savannah—Water-works.—Burns & McDonnell, Kansas City, Mo., will have plans ready in about 30 days for the construction of proposed water-works system.

St. Louis—Realty Company.—May-Stern Realty Co. has been incorporated with \$200,000 capital stock by Aaron Waldheim, Moses J. Ehrlich and Louis L. Freund.

St. Louis—Real Estate.—The Hollywood Realty & Investment Co. has been formed by Henry Sexton, Russell A. Richardson and Stephen Sexton to develop 23 acres of land in St. Louis county as residence sites.

St. Louis—Automobile Company.—Olive Automobile Co. has been incorporated with \$15,000 capital stock by Wm. Lingenbrink, Frederick W. Kriesman, Paul A. Ferbos and associates.

NORTH CAROLINA.

Asheville—Coal Chute and Ice Plant.—The Blue Ridge Coal & Wood Co., recently reported incorporated, has purchased site on which to build coal chute. It is stated that the company contemplates establishing ice factory.

Clayton—Drug Company.—The Clayton Drug Co. has completed organization with E. L. Hinton, president; J. M. Turley, secretary-treasurer, and Cadmus Young, manager.

Cumberland County—Turpentine Lands.—John Blue of Aberdeen, N. C., reported last week as having purchased 2000 acres of timber land in Cumberland county, will turpentine the timber a year or two before sawing.

Fayetteville—Cotton Harvester.—J. B. Underwood has invented and applied for patents on a cotton harvester which he will introduce. Arrangements will be made with manufacturers for building the machines, and Mr. Underwood is now prepared to correspond relative to contract.*

Goldboro—Cold-storage Plant.—S. Cohn & Son, 108 East Walnut street, contemplate installing cold-storage plant.*

Goldville—Cotton Mill.—R. L. Graham and C. E. Graham of Greenville, S. C., have leased the Banner Cotton Mills at Goldville. They will add 2500 spindles to the plant, contract for same having been awarded; present equipment 5000 spindles.

Greensboro—Electric Company.—Greensboro Electric Co. has increased capital stock from \$250,000 to \$500,000.

Greensboro—Cotton Mill.—Chartered: The Pomona Cotton Manufacturing Co., with capital stock of \$250,000, for building a cotton mill; incorporators, W. C. Bain, A. L. Bain, W. S. Thomson and Lee H. Battle of Greensboro, A. F. Wing of Palmer, Mass., and others. J. E. Sirrine of Greenville, S. C., will be architect-engineer in charge. J. F. Gallivan Building Construction Co., also of

Greenville, S. C., is building contractor. The Pomona Company takes over and will continue to completion the Etowah Mills, which has been in course of construction for some months. It was originally the intention to equip this mill with 7500 mule spindles and 500 looms.

Morehead City—Bridge.—It is reported that the Atlantic & North Carolina Railroad will build a bridge across Newport river from Morehead City to Beaufort, to be two and one-half miles long and cost \$200,000. R. P. Foster, Goldsboro, N. C., is general manager.

Morganton—Cotton Mill and Power Development.—It is reported that W. A. Mauney of Kings Mountain, N. C., and J. M. Torrence of Morganton will organize stock company to develop water-power, build an electric plant and erect a cotton factory on Green river.

Mt. Airy—Orchard Company.—Rev. R. B. Hines of Mt. Airy and A. H. Klingender of Statesville, N. C., are organizing stock company with \$30,000 capital stock and privilege of increasing to \$200,000 to grow apples on 1000 acres of land recently purchased.

Murphy—Marble Company.—The National Marble Co. has been incorporated with an authorized capital stock of \$500,000 by A. S. Emerson, J. H. Dillard of Murphy and T. M. Brady of Canton, Ga.

Raynham—Cotton Gin.—Chartered: The Raynham Ginning Co., with an authorized capital stock of \$5000, by H. A. Townsend, A. W. Bullard and G. W. Watts, to operate a cotton gin.

Raleigh—Street Improvements.—The city is arranging for the grading of Saunders street from Hillsboro street to the city limits, and bids for the work are being received. Address James I. Johnson, mayor.

Rowland—Drug Company.—George H. H. McNeil, G. M. Pate and others have incorporated the Rowland Drug Co. with \$25,000 capital stock.

St. Phillip—Fisheries Company.—The Ocean Fisheries Co. has been incorporated with an authorized capital stock of \$50,000 by J. J. Adkins, W. A. Rourke, E. K. Bryan, R. R. Stone, M. J. Corbett, C. C. Chadborn and others.

Thomasville—Spoke Factory.—The Thomasville Spoke Works Co. has been incorporated with \$20,000 capital stock by W. H. Diets, L. E. Rockett, J. A. Green, J. Hayden and W. S. Long to manufacture spokes, rims, etc.

Washington—Fertilizer Factory.—The Bragaw Fertilizer Co., reported incorporated last week with an authorized capital stock of \$125,000, has completed organization with Wm. Bragaw, president and manager; H. C. Bragaw, vice-president; Richard Bragaw, secretary, and J. G. Bragaw, Jr., treasurer. A building 200x300 feet will be erected and equipped for a daily capacity of 100 tons of fertilizers.*

Waynesville—Lumber Company.—Chartered: Spahr Lumber Co., with \$8000 capital stock, by L. R. Spahr and J. L. Roper.

Wilmington—Autograph Daters.—Thomas R. Post, James F. Post, Thomas Wilson and John S. Armstrong have incorporated the Post Dater Co. with an authorized capital stock of \$50,000 to manufacture detachable autograph daters, etc.

Wilmington—Sewerage System.—Matthew & O'Brien, Southern Building, are engineers in charge of the construction of sewerage system for the Brooklyn Sewerage Co., franchise for which was reported last week as having been applied.*

Winston-Salem—Tobacco Factory.—The Whitaker-Harvey Company is receiving bids for the erection of three-story brick addition 50x60 feet, which will be equipped for increasing the annual output to 1,000,000 pounds of plug tobacco.

Winston-Salem—Power, Heat and Light Plants.—The Winston-Salem Power Co. has been incorporated with \$125,000 capital stock by F. H. Fries, H. E. Fries, C. B. Watson and Clement Manly to operate power, heat and light plants.

SOUTH CAROLINA.

Abbeville—Ice Plant, Laundry, etc.—Chartered: Abbeville Ice, Coal & Laundry Co., with \$15,000 capital stock, by F. E. Harrison, Frederick Mishall and W. P. Green.

Batesburg—Cotton Mill.—The Middleburg Mills has awarded contract for the installation of 4000 additional spindles, increasing equipment to 10,000 spindles and 300 looms.

Blackville—Electric-light Plant.—It is reported that J. K. Hair will establish electric-light plant.

Charleston—Needle Factory.—It is reported that the National Automatic Needle Co. of New York, N. Y., contemplates establishing factory in Charleston or some other Southern city for the manufacture of needles. The

company has a capital stock of \$1,000,000. James E. Lytle is president, and R. W. Jolly, secretary.

Cheraw—Cotton Mill.—It is reported that Leroy Springs of Chester, S. C., contemplates building a \$1,000,000 cotton mill at Cheraw.

Columbia—Real Estate.—The Southern Realty & Investment Co., reported incorporated last week, has completed organization with T. C. Williams, Jr., president, treasurer and general manager, and C. T. Williams, vice-president; capital stock \$50,000.

Florence—Cotton Mill.—J. L. Barringer, J. M. Timmons, H. S. Rose and others propose organizing a stock company to build a cotton mill.

Georgetown—Chemical Works.—Georgetown Chemical Works, reported incorporated last week with \$100,000 capital stock, has completed organization with E. C. Benedict, president, and C. E. Sholes, vice-president and secretary. Rosins, turpentine, wood spirits, etc., will be manufactured. All communications should be addressed to the New York office, 164 Front street, where the laboratories are located.

Spartanburg—Knitting Mill.—The Crescent Manufacturing Co. will add from 50 to 100 knitting machines; present equipment 50 knitters, etc.

Spartanburg—Street-paving.—City will vote August 1 on the issuance of \$100,000 of bonds for street-paving; Arch. B. Calvert, mayor.

Spartanburg—Cotton-ropes Mill.—It is reported that P. H. Corr, president of the Corr Manufacturing Co., Taunton, Mass., and Mr. Hoffman of the Hoffman-Corr Manufacturing Co., 4th and Race streets, Philadelphia, Pa., will organize a company with capital stock of \$200,000 to build a cotton mill in or near Spartanburg. Their purpose is said to be to erect a plant for the manufacture of cotton rope, twine and similar product from cotton-mill waste.

TENNESSEE.

Chattanooga—Plate and Sheet Iron Works. The Chattanooga Boiler & Tank Co., reported incorporated last week with \$25,000 capital stock, will build boilers, tanks, smokestacks, steel towers, special plate and sheet iron work, etc. Buildings have been secured and machinery installed. N. H. Grady is president; S. H. Daniels, secretary-treasurer, and F. P. Jenkins, vice-president and superintendent; office, 418-434 10th street.

Chattanooga—Telephone System.—W. F. Roberts of Nashville, Tenn., engineer of the East Tennessee Telephone Co., will make plans, specifications and estimates on the construction of underground conduit system which the company proposes installing.

Clarksville—Electric-light and Power Plant. It is reported that the Consumers' Electric Light & Power Co., recently incorporated with \$10,000 capital stock, has applied for franchise to construct electric-light and power plant.

Harriman—Road-building.—The Roane County Court has appropriated \$31,000 for building 10 miles of pikes. Address County Clerk.

Livingston—Brick Works.—Chartered: The Livingston Brick Co., with \$2000 capital stock, by W. R. Officer, J. W. Rich, L. Windle, Sr., C. J. Cullom and associates.

Memphis—Cotton Compress.—The Gulf Compress Co. will hold a meeting August 10 to consider increasing capital stock from \$100,000 to \$500,000; office in Selmitar Building.

Mt. Pleasant—Building Material.—The Mt. Pleasant Lumber Co. has been organized with George W. Killebrew, president; C. R. Gilman, secretary, and A. W. Ligon, treasurer, to deal in building materials of all kinds; office, Phosphate Building.

Mt. Pleasant—Fertilizer Factory.—It is reported that a fertilizer factory will be established, and George W. Killebrew is interested.

Nashville—Grocers' Specialties.—Chartered: Grocers' Manufacturing Co., with \$75,000 capital stock, to manufacture grocers' specialties, such as baking powders, spices and gelatines. W. J. Kinsey is president; J. T. Graham, vice-president, and J. Whitney Warwick, secretary and general manager.

Nashville—Street Improvements.—City has voted the proposed \$500,000 bond issue for improving suburban streets.

Rockwood—Knitting Mill.—The Rockwood Mills has been incorporated with capital stock of \$40,000 to establish the knitting plant referred to last week; building to be 150x250 feet, and probably be equipped with 200 machines eventually. W. E. McElwee, S. B. Leiper, J. A. Erwin, J. E. Fox and T. A. Wright are the incorporators.

Tennessee—Timber Land.—It is reported that John W. Davis, Austin Smith, Hugh Jarvis, Lee Stout and W. B. Maxwell, all of Clarksburg, W. Va., have purchased 40,000

acres of timber land in Southeastern Tennessee and North Carolina.

TEXAS.

Beaumont—Shingle Mill.—The Beaumont Shingle & Lumber Co. has been organized with \$30,000 capital stock by W. C. Gray, John N. Gilbert, George W. Carroll, T. S. Reed and E. C. Wiess to erect and operate shingle mill.

Beaumont—Lumber Mill.—Harrell-Votaw Lumber Co. has incorporated with \$100,000 capital stock to manufacture lumber; incorporators, J. R. Davenport of Beaumont, Ed H. Harrell, P. C. Votaw, C. W. Votaw of Houston, Texas, and W. D. Meyers of Dallas, Texas. Messrs. Harrell and Votaw were previously mentioned as having purchased a tract of timber land in Orange county, Texas, and to erect a saw-mill with a daily capacity of 75,000 to 80,000 feet.

Beaumont—Iron Works.—It is reported that the Beaumont Iron Works contemplates enlarging plant and increasing capacity.

Cego—Cotton Gin.—Cego Gin Co. has been incorporated with \$4000 capital stock by Marx Lebrecht, J. W. Mickle, W. P. Roberts, T. R. Allen and M. B. Calvary to operate cotton gin.

Cisco—Mercantile.—Incorporated: Farmers' Mercantile Co., with \$20,000 capital stock.

Cleburne—Canning Factory.—M. D. Miller is reported as negotiating relative to establishing cannery.

Coleman—Cottonseed-oil Mill.—The Coleman Cotton Oil Co. has been incorporated with \$40,000 capital stock by W. N. Cameron, L. E. Collins, P. P. Reynolds and others to operate a cottonseed-oil mill.

Corpus Christi—Lumber Company.—J. C. Tabor, W. G. Blake and Mattie G. Mateer have incorporated the Sidbury Lumber Co. with \$10,000 capital stock.

Dallas—Dam and Spillway.—Water Commissioners have awarded contract to J. P. Nelson at 25 cents a yard for making repairs to Bachman dam and spillway referred to recently.

Dallas—Electrical Apparatus.—R. C. Bryant, W. T. Davison, W. H. Haggard and C. W. Robinson have incorporated the Bryant Bros. Company with \$5000 capital stock to deal in electrical apparatus.

Fort Worth—Realty Company.—Chartered: Arlington Heights Realty Co., with \$100,000 capital stock, by William Bryce, Robert W. Flournoy of Fort Worth, L. C. Cole of Delaware, Ohio; G. E. Montgomery and J. L. Benthitt of Shreveport, La.

Fort Worth—Seed Company.—American Seed Co. has been incorporated with \$15,000 capital stock by T. W. Labatt, A. E. Bell, M. A. Benton and F. M. Bell.

Fort Worth—Stock-yards.—It is reported that the Missouri, Kansas & Texas Railway will expend about \$100,000 in building a series of stock-yards at various points along the line. At Fort Worth 111 pens will be built with a capacity for 200 cars, and the yards will be paved and equipped with a disinfecting and cleaning plant involving an expenditure of \$25,000; at Hillsboro, Texas, capacity 125 cars, 52 pens; Smithville, Texas, 40 cars capacity; Muskogee, I. T., capacity 150 cars; Sedalia, Mo., capacity 250 cars; Mokane, Mo., capacity 75 cars; Denison, Texas, additional pens will be built to accommodate 40 more cars. A. A. Allen, St. Louis, Mo., is general manager.

Fort Worth—Pickling and Canning Factory.—It is reported that C. M. Hunt of Eaton Rapids, Mich., contemplates the establishment of pickling and canning factory.

Houston—Irrigation Company.—Judge D. E. Wright, D. E. Treble of Houston, R. H. Foster of San Antonio, Texas, and associates will organize company with \$300,000 capital stock to install plant for irrigating 62,500 acres of land on the Rio Grande river.

Houston—Brick Works.—The Houston White Brick Co. has increased capital stock from \$80,000 to \$125,000.

Houston—Wood-preserving Plant.—The Percival Wood Preserving Co., recently reported organized with \$100,000 capital stock, will erect building 50x100 feet and equip for the manufacture of wood-preserving composition, terebo-proof composition, having a daily capacity of 100 barrels; office, 107-108 Opera House Building.*

Itasca—Cotton Gin.—Chartered: Planters' Gin Co., with \$6000 capital stock, by E. E. Griffin, C. L. Martin and John R. Griffin.

Jefferson—Electric-light and Ice Plant.—The Jefferson Ice, Light & Power Co. will erect a 1200-light electric plant and 20-ton ice factory, replacing plants recently reported burned.

Longview—Iron Works.—It is reported that George McDonald has purchased site on

which to erect building, which will be equipped for increasing the capacity of his iron works.

Lufkin—Publishing.—It is reported that Edwin F. Loomis of Troy, Pa., will establish plant for the publication of a weekly newspaper.

Marlin—Iron Bridges.—Falls county has voted affirmatively the bond issue for the erection of two iron bridges over the Brazos river, previously reported. Address County Clerk.

Montell—Telephone System.—The Citizens' Telephone Co. has been incorporated with \$1000 capital stock by A. S. Baylor, T. S. Sutherland and associates.

Palestine—Furniture Factory.—W. W. Wainwright, previously reported as contemplating the organization of company for the establishment of furniture factory, has erected a three-story brick building 60x180 feet, which will be equipped for this purpose. About \$15,000 will be invested.*

Plano—Corn Shelter and Elevator.—Hugston Bros. will erect two buildings, 32x44 feet and 14x60 feet, respectively, at a cost of \$8000, replacing plant previously reported burned. J. E. Erickson is engineer in charge.*

Port Arthur—Oil-pipe Line.—It is stated that preliminary investigations are now in progress to determine whether it is feasible to construct the proposed pipe line to convey oil from Kansas to the Gulf. This plan involves the construction of a pipe line from Chanute, Kansas, to Port Arthur, a distance of 650 miles, and while no authoritative statement has been made as to this project, it is said that the basis of its construction would be 10,000 barrels of oil daily. The construction of the six-inch pipe line would require, it is reported, the expenditure of \$5,000,000. George L. Craig, formerly manager of the J. M. Guffey Petroleum Co., is in charge of the preliminary work in Kansas and the Territories. It is understood that A. W. Mellon, president of the Mellon National Bank, Pittsburgh, Pa., and his associates in the J. M. Guffey Petroleum Co. and the Gulf Refining Co. are to finance the enterprise.

Port Arthur—Sewerage System.—R. C. Holmes and associates have been granted franchise to construct and operate sewerage system for 50 years, city to have the option to purchase every 10 years.

Sacul—Lumber Mill.—E. A. Bryan, J. B. Cranfill and Tom E. Cranfill, Jr., have incorporated the Bryan Lumber & Manufacturing Co. with \$10,000 capital stock.

San Felipe—Canal Construction.—A. Ludwig, engineer of the San Felipe Rice & Canal Co., it is reported, has made survey for proposed canal to be constructed from the Brazos at San Felipe, 30 miles, to a point on the Southern Pacific Railway. There will be about 40,000 acres of land adjacent suitable for rice-growing.

Sentinel—Cotton Gin.—The Retrop Co-operative Gin Co. has been incorporated with \$5000 capital stock by L. G. Gilliam, W. F. Winningham, H. W. Hulet, J. P. Ensey and associates.

Sherman—Milling Company.—Incorporated: The Eagle Mills, with \$50,000 capital stock, by J. B. Brennan, H. R. Wallace and C. S. Hyde, to do a general milling business.

VIRGINIA.

Charlottesville—Phosphate-mining, Fertilizer-manufacturing, etc.—The Southwestern Mining & Chemical Co. has incorporated with an authorized capital stock of \$500,000 to mine phosphate, graphite, etc., manufacture fertilizers, graphite paint, etc. Charles E. Hughes is president; Eldridge Turner, vice-president (both of Charlottesville), and John F. Sommers, secretary-treasurer, Louisa, Va.*

Craigsville—Telephone System.—Incorporated: The Craigsville & Bell's Valley Mutual Telephone Co., with J. R. Tuttle, president; D. Kunkle, vice-president, and L. E. Hicks, secretary-treasurer; capital stock \$5000.

Drakes Branch—Wagon Works.—The Drakes Branch Wagon Works is the title of company reported last week as organized with George B. Russel, president; Robert W. Payne, vice-president, and W. H. Pettus, secretary, to manufacture wagons; capital stock \$20,000.

Granite—Granite Quarry.—It is reported that J. Henry Brown of Richmond, Va., has purchased a tract of land near Granite containing granite deposits, and will arrange at once for its development.

Manchester—Coffee-roasting Plant.—It is reported that the Aragon Coffee Co. has completed arrangements for the erection of proposed two-story brick building, which will be equipped with the most improved machinery for roasting and handling coffee.

Manchester—Furniture Factory.—The Eureka Furniture & Manufacturing Co. will re-establish plant recently burned at a loss of \$25,000; William Gratznowsky, general manager; office, 414 West 15th street.*

Norfolk—Brick and Tile Works.—Lawrenceville Brick & Tile Co. has incorporated with an authorized capital stock of \$25,000 to manufacture brick and tile. E. Tredwell is president; G. R. Swink, vice-president, and W. C. Archer, secretary-treasurer.

Norfolk—Coal Piers.—Dispatches state that W. Harry Brown of Pittsburgh, Pa., who recently purchased water-front property at Norfolk for \$65,000, will build thereon large coal piers to load the Palmer fleet of schooners, 12 in number, with a total register of 48,100 tons. Mr. Brown and associates own 18,000 acres of coal lands in West Virginia, from which the coal will be shipped.

Portsmouth—Ice-plant Improvements.—The Portsmouth Coal & Ice Co., it is reported, is arranging for the installation of machinery for increasing its capacity 100 tons daily. It is also stated that a cold-storage plant will be added.

Richmond—Tannery.—Staunton Tanning Co. has incorporated with \$300,000 capital stock to conduct a tannery. Reuben Burton is president, and M. H. Chalkley, secretary-treasurer and general manager.

Richmond—Coal Mines, etc.—The Excelsior Coal & Lumber Corporation has incorporated with an authorized capital stock of \$500,000 to mine coal, etc. D. C. Zollicoffer is president, and W. D. Browning, secretary-treasurer.

Wytheville—Bottling Works.—The Wytheville Ice & Dairy Co. contemplates installing bottling works to be operated in connection with ice factory.*

WEST VIRGINIA.

Brooke County—Coal Mines.—It is reported that C. H. Muerke of Chicago, Ill., has purchased 4000 acres of coal land in Brooke county for development.

Charleston—Granite Quarries.—The Red Mountain Granite Co. has been incorporated with \$50,000 capital stock by Fred Gardner, C. L. Topping, V. T. Churchman, W. H. Spencer and Addison Hall, all of Charleston.

Charleston—Coal Mines.—Cassingham Coal & Land Co. has incorporated with \$300,000 capital stock to develop coal lands; incorporators, W. A. MacCorkle, J. E. Chilton, W. E. Chilton, G. O. Chilton and T. S. Clarke.

Clarksburg—Lumber Mill.—Tellico Rose Lumber Co. has been incorporated with \$200,000 capital stock by Lee Stout, S. Austin Smith, E. A. Hill of Clarksburg, Lee Davison and H. D. Heckman of Mannington, W. Va., to manufacture lumber.

Elkins—Timber and Mineral Lands.—The Dunmore Land & Timber Co. has been incorporated with \$100,000 capital stock by W. H. Cobb, Joe B. Moore, J. F. Strader of Elkins, Ellhu Hutton of Huttonsville, W. Va., and W. A. Porter of Clearfield, Pa., to deal in mineral and timber lands, etc.

Fairmont—Development Company.—Chartered: United States Industrial Co., with \$1,000,000 capital stock, by T. E. Moran, John P. Poling, D. L. L. Yost of Fairmont, Fred W. Brown of Pittsburgh, Pa., and George E. Graves of St. Louis, Mo.

Huntington—Oil and Gas Wells.—Araconia Oil & Gas Co. has been incorporated with \$50,000 capital stock by L. Merrill, George F. Miller, S. S. Altizer, Thomas H. Harvey and associates to drill for oil and gas.

Huntington—Mercantile.—Hensley Mercantile Co. has been incorporated with \$10,000 capital stock by W. G. Hensley and others.

Keyser—Glass Factory.—F. B. Bannister of Morgantown, W. Va., reported last week as contemplating the establishment of glass factory, will, with others, organize the Keyser Glass Co. with \$50,000 capital stock to operate the plant, manufacturing glass tumblers and other glassware of this character. The company will require five acres of ground for plant, which will include a main building, blowing-room 80x90 feet, tempering-room 50x75 feet, assembly-room 50x150 feet, all of brick and iron; also a cooperage shop 40x60 feet, hay and storage shed 30x50 feet and mixing-room 25x50 feet, and office building.

Keyser—Street-paving and Sewerage Improvements.—The town will vote August 8 on the issuance of \$20,000 of bonds for paving certain streets and extending sewerage system. Address Town Clerk.

Keyser—Gas Wells.—The People's Gas Co. has been incorporated with \$50,000 capital stock by T. B. Davis, H. G. Burton, W. W. Woods, J. M. Bright and C. W. Silver to drill for gas.

Pickens—Lumber Company.—The Ohio River Lumber Co. has been incorporated with \$25,000 capital stock by H. T. Wilson, Oaman

E. Swartz of Clarksburg, W. Va.; J. P. White of Diana, W. Va.; I. M. Butts and James McCormick of Marietta, Ohio, to deal in and manufacture lumber.

Pickens—Lumber Company.—Incorporated: The Oak Lumber Co., with \$25,000 capital stock, by E. Bryan Templeman, Osman F. Swartz, Charles B. Alexander, Anthony Bowen and Ernest Hutton, all of Clarksburg, W. Va., to manufacture and deal in lumber.

Steeltown—Roofing and Cornice Works.—The Wheeling Roofing & Cornice Co. has issued \$100,000 of bonds for improvements to plant; office, Chapline street, Wheeling, W. Va.

Sutton—Drug Factory.—John Newlon, C. H. Bland, Alfred Walker, Chas. J. Heyer and Reginald P. Benner have incorporated the Sutton Medicine Co. with \$25,000 capital stock to manufacture drugs.

Tloga—Lumber Company.—Frank L. Beauge, Walter Webster of Tloga, William O'Connor, Leonard Harrison, Horace B. Packer, Wm. D. Van Horn and Fred W. Siemens of Wellsboro, Pa., have incorporated the Tloga Lumber Co. with \$300,000 capital stock.

Welch—Brewery.—Rockwell Marietta, Clair Stillwagon and associates contemplate organizing stock company to erect and operate brewery.

Wheeling—Drug Factory.—Chas. R. Goetze, Jessie C. Goetze, Charles W. Goetze, Mrs. Christina Goetze and W. R. Wells have incorporated as Charles R. Goetze & Co. with \$25,000 capital stock.

INDIAN TERRITORY.

Antlers—Vehicle and Implement Works.—It is reported that the Oskaloosa (Iowa) Manufacturing Co., Nathan Schee, president, has secured site on which to locate plant for the manufacture of vehicles and implements.

Bartlesville—Sewerage System.—City will vote August 8 on the issuance of \$17,000 of bonds for extending sewerage system; W. H. Whaley, city engineer.

McCurtain—Coke Ovens.—It is reported that the Fort Smith & Western Railroad will shortly begin the erection of 100 additional coke ovens. A. C. Dustin is president and treasurer, Cleveland, Ohio.

Tulsa—Clock and Watch Factory.—The Tulsa Clock & Watch Manufacturing Co. has been organized with \$125,000 capital stock to manufacture clocks and watches. Clifton George is president; T. E. Smiley, vice-president; E. A. Bazzett, secretary and general manager, and C. B. Lynch, treasurer.

OKLAHOMA TERRITORY.

Custer City—Townsite Company.—Incorporated: The Custer City Townsite Co., with \$4500 capital stock, by John E. Miller, J. F. Cole, T. H. Lindley, C. H. Dean and J. H. Preatt.

Enid—Real Estate.—The Santa Fe Townsite Co. has been incorporated with \$100,000 capital stock by Albert Loewn, J. G. Conkling and Edward Blindschadler.

Oklahoma City—Soldier and Flux Company.—Incorporated: The Aluminum Solder & Flux Co., with \$400,000 capital stock, by A. J. McMahon of Oklahoma City, Leon Ward of Doylestown, Ohio, and others.

Oklahoma City—Creamery.—Incorporated: The Continental Creamery Co., with \$100,000 capital stock, by A. S. Snively, H. W. Jensen, C. Porter Johnson and associates.

Oney—Cotton Gin and Grist Mill.—The Oney Gin & Mill Co., reported incorporated last week with \$4500 capital stock, will operate a three 70-saw gin with mill attached. A building 24x50 feet and cottonseed-house will be erected. M. L. Hennessy is president; J. J. Gramlich, secretary, and E. A. Thompson, treasurer.*

BURNED.

Bardwell, Ky.—The Carlisle Manufacturing Co.'s plant; loss \$7000.

Bear, Ark.—The Valley Planing Mills; loss \$4000.

Corsicana, Texas.—D. June & Co.'s cotton gin; loss \$2000.

Cumberland, Md.—Maryland Rail Co.'s plant damaged by explosion; loss \$30,000.

High Point, N. C.—Enameling and finishing department of the High Point Metallic Red Co.

Humble, Texas.—Twelve oil tanks of the Texas Company; loss \$500,000.

Lake Charles, La.—Lake Charles Steam Laundry Co.'s plant damaged.

Lake Charles, La.—J. G. Powell's saw-mill; loss \$90,000.

Little Rock, Ark.—The newspaper and job printing plant of the Arkansas Democrat; loss \$125,000.

Manchester, Va.—Eureka Furniture Co.'s plant; loss \$25,000.

Ripley, Tenn.—The Ripley Roller Mills; loss \$15,000.

Rochelle, Ga.—The Boynton Hotel; loss \$2500.

South Boston, Va.—The Halifax Distilling Co.'s plant; loss \$5000.

Tolnetto, Ala.—Washington Lumber Co.'s mill.

Waco, Texas.—Blessington Bros.' candy factory; loss \$3000.

Wilsonburg, W. Va.—The Becum-Brown Lamplack Co.'s factory; loss \$5000.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Alexandria, Va.—Dormitory.—Plans and specifications have been completed for dormitory building to be erected at the Episcopal High School, Prof. L. M. Blackford, principal.

Anderson, S. C.—Hotel Improvements.—It is reported that the Hotel Chiquola will be enlarged and improved.

Anderson, S. C.—Hotel.—C. M. Guest has contract to erect hotel for the Anderson Real Estate & Investment Co. after plans by Jos. Casey; structure to be of brick, equipped with electric lights, and cost \$10,000.

Anniston, Ala.—Warehouse.—C. J. Houser has contract to erect warehouse for Robinson Bros.; cost \$10,000.

Ashdown, Ark.—Business Building.—Dr. A. N. Woods is having plans prepared by Sidney Stewart, State National Bank Building, for a two-story business building, of brick and stone, concrete foundation, iron I beams and columns, composition roof, mosaic tiling, hard plaster and plate glass; cost \$3000.

Ashland, Va.—School Building.—Town has secured site on which to erect proposed \$5000 school building.

Atlanta, Ga.—City Hall.—City contemplates issuing \$500,000 of bonds for the construction of a City Hall. Address Mayor Woodward.

Atlanta, Ga.—Infirmary.—The Tabernacle Infirmary contemplates erecting fireproof steel-frame building. Address Dr. Len G. Broughton.

Austin, Texas.—Dwelling.—Joseph D. Sayers has permit to erect a \$5000 residence.

Baltimore County, Md.—Stable and Carriage-house.—H. Carroll Brown, 403 North Charles street, Baltimore, Md., has had plans prepared by Darrach & Beekman of New York, N. Y., for stable and carriage-house at Brookland in the Green Spring valley; building to be 37x150 feet with two wings, each 24x65 feet.

Bel Alton, Md.—Hotel.—T. W. Wills has contract to erect hotel for P. R. Wills after plans by Beecher, Friz & Gregg, Cathedral and Hamilton streets, Baltimore, Md.; the building to be of frame with solid brick foundation, 60x70 feet, equipped with electric lights, call bells, etc., and cost \$10,000.*

Bessemer City, N. C.—Church.—R. N. Hunter of Charlotte, N. C., has contract to erect proposed \$4000 edifice for the Associate Reformed Presbyterian Church.

Bristol, Tenn.—Association Building.—Y. M. C. A. is having plans prepared for the erection of a \$40,000 building on site recently purchased.

Belton, Texas.—Fire Station.—The Belton Fire Department has had plans prepared for the erection of two-story building for fire station; to be of concrete with cement floors.

Canton, Texas.—Bank Building.—A new bank organized with O. S. Houston of Fort Worth, Texas, president, contemplates erecting brick building.

Charlotte, N. C.—Business Building.—J. W. Wadsworth's Sons Co. is having plans prepared by Hook & Rogers for the erection of proposed pressed-brick building.

Chattanooga, Tenn.—Association Building.—Young Men's Christian Association is having plans prepared for the erection of five-story brick and stone building, 56x90 feet, at a cost of \$40,000. Gymnasium, pool and baths will be installed. C. W. Olson is chairman building committee.

Cumberland, Md.—Dwelling.—C. H. Holtzmann has had plans prepared by J. S. Siebert for the erection of a two-story brick residence with stone trimmings, slate roof, leaded and plate glass, baths, lavatories, gas and electric lights, etc.; cost \$10,000.

Dallas, Texas.—Bank Building.—The Western Bank & Trust Co. has secured site, 25x100 feet, on which to erect addition to building.

Dickens, Texas.—Courthouse Improvements, etc.—The Commissioners' Court of Dickens

county, Texas, will receive bids until August 15 to replaster, varnish, etc., the courthouse, and probably an addition to the jail.

Durham, N. C.—Church.—St. Phillip's Episcopal Church contemplates erecting \$30,000 edifice. S. S. Bost is pastor.

Elba, Ala.—Hotel.—Elba Hotel Co., reported incorporated last week to build hotel, will let contract about August 1 for the erection of two-story brick building 50x75 feet, of stone and brick, covered with metal shingles, fireproof construction, to cost about \$6000. Ausfeld & Chapman, Montgomery, Ala., are preparing the plans. F. P. Rainer is president.*

Elizabeth City, N. C.—Pavilion, etc.—The Elizabeth City Electric Light & Power Co. has secured 15 acres of land on the Euclid Heights road, which will be improved as an amusement park, erecting pavilions, etc.

Elkins, W. Va.—Dwelling.—J. Scott Bell has purchased site on which to erect residence.

El Paso, Texas.—Dwelling.—Lewis Frankenburg has permit to erect proposed \$5500 brick residence.

Fairmont, W. Va.—Masonic Temple.—The Fairmont Masonic Building Co. has been incorporated with \$150,000 capital stock by E. M. Showalter, F. W. Hennen, H. F. Smith, T. W. Fleming, L. I. Malone, J. E. Sands and associates to erect \$100,000 Masonic Temple for which Baldwin & Pennington, 311 North Charles street, Baltimore, Md., were reported last week as preparing plans.

Files, Texas.—Building.—Bids will be received until August 1 at the office of C. A. Gill & Son, architects, Dallas, Texas, and at the office of Rev. Junius B. French, Fort Worth, Texas, for furnishing material and erecting a two-story building at Files. Plans and specifications may be had on application. Usual rights reserved; Rev. J. D. McLean, chairman, Tyler, Texas.

Fort Worth, Texas.—Building.—Bids will be received until August 3 at the office of A. W. Campbell, 240 Main street, Dallas, for the erection of a two-story and basement annex to the Masonic Widows and Orphans' Home. Certified check for 2 per cent. of amount of bid must accompany each bid; plans and specifications at the office of J. D. Terrell, Terrell, Texas; William James, Fort Worth, Texas; Masonic Temple, Waco, Texas; S. M. Bradley, Denton, Texas; Col. M. F. Mott, Galveston, Texas, and J. E. Flanders, architect, Dallas, Texas. Separate bids for the erection of an auditorium in connection with the above will be received at the same time and place. Usual rights reserved.

Fort Worth, Texas.—Church.—F. E. Kidder, Denver, Col., has completed plans for edifice previously reported to be erected by the First Congregational Church, G. W. Ray, pastor, and bids for the construction will be asked in about 30 days; building to be 72x88 feet, of metal lath and cement construction, equipped with electric lights, etc., and cost \$17,000.*

Fort Worth, Texas.—Association Building.—Heck & Ulander have contract to erect three-story brick building with composition roof at a cost of \$30,000 for the Y. M. C. A., for which Sanguinet & Staats were previously reported as preparing plans.

Franklinton, La.—Courthouse.—Sealed bids addressed to J. Leon Pounds, president police jury, Franklinton, La., care of P. B. Carter, will be received until August 26 for furnishing all material and labor and erecting courthouse in accordance with plans and specifications on file in the clerk's office, Franklinton, and at the office of Andrew J. Bryan, architect, Hennen Building, New Orleans, La. Certified check for \$500 must accompany each bid. Usual rights reserved. For other information regarding plans apply to the architect.

Frederick, Md.—Warehouse.—C. E. Cline is having plans prepared by Moore & Clifford, Builders' Exchange, Baltimore, Md., for the erection of a four-story brick and stone warehouse, to be equipped with electric and gas lights, and cost \$20,000.

Greensboro, N. C.—Warehouse.—The Safety Building Co. has purchased site on which to erect tobacco warehouse 80x128 feet, having a floor space of 10,000 feet, to be known as the Planters' Warehouse.

Greenville, Miss.—Hotel Improvements.—Charles Pearce has contract to erect proposed annex to the Hotel Cowan; cost \$25,000.

Guin, Ala.—Bank Building.—Bids will be received until August 10 at L. Pearce's store, Guin, and at the office of W. E. Spinks, architect, Guarantee Building, Birmingham, Ala., where plans and specifications can be seen, for the erection of a brick bank building, to be completed by September 15. Certified check for \$250 must accompany each bid. Usual rights reserved.

Gulfport, Miss.—Bank Building.—The Gulf-

port State Bank has let contract to D. J. Haire for the erection of two-story building to cost \$17,000, for which H. L. Burton, New Orleans, La., was previously reported as preparing plans.

Hinton, W. Va.—Hotel.—The Hinton Hotel Co. has about completed arrangements for the erection of five-story hotel previously reported, and contract for the construction will be let about August 1. The basement walls will be of concrete, the upper walls of a pink shade of brick with white-brick trimmings, the lobby to be finished in marble with wrought-iron stairway. Electric passenger and freight elevator will be installed. Frank P. Milburn, Columbia, S. C., prepared the plans.

Hope Mills, N. C.—Bank Building.—The Bank of Hope Mills is completing arrangements for the erection of brick and stone building with burglar-proof vault.

Humboldt, Tenn.—School Building.—L. M. Weathers & Co. of Memphis, Tenn., are preparing plans for proposed \$10,000 school building.

Jefferson, Tenn.—Dormitory.—M. E. Parmelee, Knoxville, Tenn., is preparing plans for dormitory for Carson & Newman College; building to be of brick and concrete, stone trimmings, slate roof, baths, etc.

Kansas City, Mo.—Dwelling.—Hugh C. Ward is having plans prepared by Wilder & Wight, Dwight Building, for the erection of residence 42x62 feet, to cost \$20,000.

Kansas City, Mo.—Warehouse.—C. A. Burton Machine Co. is erecting warehouse building for jobbing purposes, and not to be equipped as machine shop as reported last week.

Knoxville, Tenn.—Dwelling.—Dr. R. P. Oppenheimer is having plans prepared by L. C. Waters for a \$7000 brick-veneer residence.

Knoxville, Tenn.—Office Building.—I. C. Waters is preparing plans for a three-story brick and stone office building to be erected by Dr. Albert G. Kern at a cost of \$7000.

Knoxville, Tenn.—Office Building.—Mrs. Florence Moore is having plans prepared by Mathews & Broome for the erection of a three-story brick and stone office building 25x80 feet, equipped with hot-air heating system, electric and gas fixtures, etc.

Knoxville, Tenn.—Dwelling.—Galyon & Borches have contract to erect \$7500 residence for W. P. Chamberlain after plans by Mathews & Broome.

Knoxville, Tenn.—Business Building.—Barber, Klutz & Graf have completed plans for proposed five-story building for Miller Bros.

Knoxville, Tenn.—Business Building.—Dan Dewine and S. S. Campbell have had plans prepared by Barber, Klutz & Graf for the erection of a two-story brick building, 90x100 feet, to cost \$15,000.

Lake Charles, La.—Masonic Temple.—Lake Charles Lodge No. 165, A. F. & A. M., is having plans prepared by I. C. Carter for the erection of three-story building, 50x100 feet, of brick, reported last week to be erected at a cost of \$25,000. Adolph Meyer is secretary.*

Lake Charles, La.—Depot.—The St. Louis, Watkins & Gulf Railway is reported as completing arrangements for the erection of proposed passenger and freight stations; H. B. Kane, general manager.

Lawton, O. T.—Business Block.—Fred Kranling has purchased site on which to erect business block.

Leesville, La.—Bank Building.—Price & Barney have contract to erect two-story brick building, 75x100 feet, for the First National Bank after plans by I. C. Carter of Lake Charles, La.; cost \$20,000.

Lexington, Ky.—Hotel.—It is proposed to erect a hotel, and Joseph S. Botts is interested.

Lexington, N. C.—Church.—Lutheran congregation contemplates erecting \$5000 edifice; Edward Fullenwider, pastor.

Lexington, Ky.—Building.—Geo. R. Hunt, trustee of Mrs. Clara D. Livingston, Trust Company Building, Lexington, will receive bids until July 27 for the erection of a three-story building of brick, 32½x160 feet, in accordance with plans and specifications on file at office. Usual rights reserved.

Little Rock, Ark.—Hotel.—Bids will be received until September 14 for the erection of a modern fireproof building, 175-room capacity. Plans can be seen at the office of Geo. R. Mann, architect, Little Rock, or special sets can be obtained from L. Ruckert, Laclede Building, St. Louis, Mo., after August 15.

Longview, Texas.—City Hall and Fire Station.—Bids will be received until August 1 by T. C. Morgan at the First National Bank for the erection of a City Hall and fire station. Plans and specifications on file at D. D. Pinkham's store. Usual rights reserved.

Louise, Texas.—Warehouse.—The Wharton

County Warehouse Co. has let contract to the Bailey Mills Co. of Victoria, Texas, for the erection of proposed \$6800 warehouse.

Louisville, Ky.—Office Building.—Arrangements are being completed and contract will shortly be let for the erection of proposed addition and other improvements to the Kenyon Building at a cost of \$50,000. C. C. Stoll and C. B. Nordeman, members of board of trustees, can be addressed.

Louisville, Ky.—Apartment-house.—Maury & Hillerich, Board of Trade Building, are preparing plans for a four-story apartment-house of structural steel to be erected by Walter S. Adams and associates at a cost of \$100,000.

Lynchburg, Va.—Dwellings.—D. S. Evans will erect a frame residence with tin roof at a cost of \$5200.

Lynchburg, Va.—Association Building.—Plans have been submitted by Frye & Chesterman and Lewis & Burnham for \$50,000 Y. M. C. A. Building, previously reported.

Mangum, O. T.—Courthouse.—L. F. Lee of Oklahoma City, O. T., has been awarded contract for the erection of \$96,000 courthouse for Greer county, previously reported.

Marlington, W. Va.—School Building.—Plans are being prepared for the erection of a two-story brick school building 40x60 feet. Address Town Clerk.

Martin, Tenn.—Church.—The Baptist congregation has let contract for the erection of edifice 82x96 feet, to cost \$12,000. Address The Pastor.

Memphis, Tenn.—Building.—The Home Building & Insurance Co. will erect a three-story brick building to cost \$10,000.

Memphis, Tenn.—Office Building.—R. E. McGill of Memphis and associates of St. Louis, Mo., have purchased site on which to erect an eight-story building 74x69 feet; to be absolutely fireproof, of steel construction, have steam heat, electric elevators, and cost \$200,000. A. B. Groves, St. Louis, Mo., is the architect.

Memphis, Tenn.—Church.—The McLenore Avenue Presbyterian Church, J. H. Morrison, pastor, has purchased site on which to erect proposed \$50,000 edifice.

Memphis, Tenn.—Warehouse.—Pritchard Bros. have contract to erect warehouse for the H. Wetter Manufacturing Co., after plans by Shaw & Pfeil; to be 125x70 feet, of ordinary construction, equipped with electric elevator, and cost \$22,000.

Memphis, Tenn.—Flat Building.—W. R. Barksdale is having plans prepared by L. C. De Van for a two-story brick-veneered flat building to cost \$20,000.

Memphis, Tenn.—Warehouse.—Chighizola, Harker & Cairns are preparing plans for co-operative shipping station and warehouse previously reported to be built by the Linden Shipping Co., D. W. Fly, president, at a cost of \$250,000; building to be three stories, of brick and stone, steel construction, 150x125 feet. The company is also negotiating for an additional site on which to erect a similar station, 150x226 feet, at a cost of \$150,000.

Memphis, Texas.—Building.—Gray & Hudgins have let contract to B. T. Williams of Childress, Texas, for the erection of proposed stone building 60x100 feet.

Mobile, Ala.—Warehouse.—Bids will be received until August 7 by R. V. Taylor, general manager Mobile & Ohio Railroad Co., Mobile, for the erection and completion of a two-story warehouse of frame construction covered with corrugated siding. Certified check for \$1000, payable to the Mobile & Ohio Railroad Co., must accompany each bid. Plans and specifications can be had by calling on Fred T. Lack, architect Mobile & Ohio Railroad Co., Mobile. Usual rights reserved.

Morganton, N. C.—School Building.—Morganton Graded School, John H. Pearson, president board of trustees, has had plans prepared by Wheeler & Runge, Charlotte, N. C., for the erection of school building, 122x60 feet, previously reported. Hot-water heating apparatus and electric lights will be installed. Bids for the erection will be received until August 23.*

Murfreesboro, N. C.—School Building.—D. K. Ceel of Lexington, N. C., has contract for the erection of proposed \$8000 school building at Chowan Institute.

Nashville, Tenn.—Warehouse.—Phillips, Webb & Co., it is reported, will erect warehouse.

Nashville, Tenn.—Warehouse, etc.—J. R. Hale & Sons of Murfreesboro, Tenn., have purchased site in West Nashville on which to erect warehouse and grain-handling plant; building to be 100x300 feet, and the warehouse to have a storage capacity of 100,000 bushels. Contract for conveying and elevating machinery has not been let.

New Orleans, La.—Lodge Building.—The

local lodges of Pythians contemplate the erection of Pythian Castle at a cost of \$250,000.

New Orleans, La.—Automobile Garage.—The Crescent City Automobile Co. has let contract to Charles A. Sicard for the erection of proposed automobile garage; building to be of galvanized iron, with cement floor.

New Orleans, La.—Hotel.—A Monteleone, proprietor Commercial Hotel, has purchased additional site on which to erect another 10-story annex.

Norfolk, Va.—Automobile Garage.—The Virginia Automobile Co. has purchased site 40x100 feet on which to erect proposed automobile garage; cost about \$4000.

Opelousas, La.—Hotel.—John W. Lewis, Bernard Bennet, G. H. Cretin, L. E. Littell, M. L. Swords, E. M. Boagni and associates have incorporated the Opelousas Development & Improvement Co., Ltd., with \$50,000 capital stock to erect hotel. Plans by Honold & Gauthier, Abbeville, Ga., have been adopted for proposed building.

Owensboro, Ky.—Armory.—W. T. Wellman, architect, Central Trust Building, will receive bids until August 15 for the erection of pressed-brick and stone armory building, 76x168 feet, for Daviess county. Certified check for 1 per cent. of amount of bid must accompany each proposal. Plans and specifications on file at architect's office, or may be obtained by depositing \$10 with the architect; Geo. V. Triplett, county judge.

Paintsville, Ky.—Dwelling.—It is reported that John C. Mayo will erect a \$50,000 residence.

Palestine, Texas.—School Building.—City is considering the erection of school building in the fourth ward. Address The Mayor.

Parkersburg, W. Va.—M. H. Flower will erect two brick dwellings to cost \$5000 each.

Parkersburg, W. Va.—Dwelling.—Henry Logan has let contract to J. W. Daniel for a two-story press-brick residence to cost \$7000.

Parkersburg, W. Va.—Apartment-house.—John W. Daniel has contract to erect Sam Logan's proposed three-story brick apartment-house to cost \$12,000.

Parksville, Va.—Bank Building.—Parksville National Bank is having plans prepared by F. E. & H. R. Davis, 220 St. Paul street, Baltimore, Md., for the erection of one-story bank building, 25x35 feet, to have slate roof, marble tiling, fireproof vault and steam heat.

Petersburg, Va.—Warehouse.—Incorporated: Oaks Warehouse, with W. L. Venable, president; J. E. Venable, vice-president, and C. F. Collier, secretary-treasurer; capital stock \$15,000.

Pine Bluff, Ark.—Telephone Exchange.—F. Armit of Little Rock, Ark., has contract to erect proposed telephone exchange building for the Southwestern Telegraph & Telephone Co.; to be two stories, of press brick, 60x80 feet, and cost \$18,000.

Prattville, Ala.—Warehouse.—Chartered: Planters' Warehouse Co., with \$20,000 capital stock, by Daniel Pratt, Allen Northington, R. L. Faucet, C. E. Thomas, B. W. Moncrief and associates.

San Antonio, Texas.—Association Building.—The Y. M. C. A. has awarded contract to P. T. Shields for the erection of building after plans by Harvey L. Page; to be five stories, 50x90 feet, of fireproof construction, and cost \$40,000.

Savannah, Ga.—Dwelling.—Harvey Granger contemplates erecting residence to cost about \$20,000.

Scottsville, Ky.—College Building.—Building Committee, A. S. Gardner, chairman, will receive bids until August 1 for the erection of a two-story brick college building. Plans can be examined at the office of James H. Yeaman, architect, Nashville, Tenn., or at Scottsville, Ky. Usual rights reserved.

Staunton, Va.—Depot.—John Wilson, Richmond, Va., has contract to erect proposed \$30,000 passenger depot for the Chesapeake & Ohio Railway Co.

Stevenson, Md.—Church.—M. H. Merryman, Towson, Md., has contract to erect proposed stone edifice 55x65 feet for the Methodist Episcopal Church.

St. Louis, Mo.—Office Building.—James Black Masonry & Contracting Co. has contract to erect 12-story addition to the Frisco Building after plans by Eames & Young; cost \$300,000.

St. Michaels, Md.—School Building.—U. G. Ross has contract at \$700 for the erection of school building for which Owens & Sisco, 14 East Lexington street, Baltimore, Md., were previously reported as preparing plans.

Summersville, W. Va.—Bank Building.—George W. Vredenburg of Richwood, W. Va., has contract to erect two-story building 24x36 feet, of concrete, for the Nicholas County Bank, previously reported.

Sumter, S. C.—Courthouse.—Edwards & Walter, Columbia, S. C., have been engaged to prepare plans and specifications for courthouse previously reported to be erected by Sumter county; cost \$60,000.

Terrell, Texas.—Church.—Bids will be received until August 8 at the office of John L. Terrell, Terrell, for the erection of an edifice for the Episcopal Church. Plans at office of John L. Terrell, also at office of Archer & Skielvig, architects, Dallas. Certified check for 5 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Tiger, Ga.—Hotel.—Dr. R. H. Stanley, Clark Grier, J. E. Smith and John Williams of Dublin, Ga., have formed a stock company for the erection of a hotel near Tiger.

Vicksburg, Miss.—Bank and Office Building.—Fred J. McGraw has contract to erect eight story bank and office building for the First National Bank, for which Knowles & Co. of New York, N. Y., were previously reported as preparing plans; building to be of brick with stone trimmings, steel frame and cost about \$175,000.

Washington, D. C.—Dwellings.—B. Frank Meyers has prepared plans for 25 dwellings to be erected by L. H. Meyers.

Washington, D. C.—Office Building.—A. S. Bated has contract for the erection of a three-story frame and cement office building at Takoma Park for the Seventh Day Adventists; cost \$14,000.

Westernport, Md.—Building.—The Brady Construction Co. of Fairmont, W. Va., has contract for the erection of proposed \$20,000 school, hall and lodge-room building for the Catholic Church.

Winston-Salem, N. C.—Memorial Building. Fogle Bros. have contract for the R. E. Caldwell Memorial Building reported last week to be erected by the Presbyterian church as a Sunday-school annex; building to be of ordinary construction, 9250 feet, equipped with hot-air heating plant, electric lights, etc., and cost \$12,900.

RAILROAD CONSTRUCTION.

Railways.

Alexandria, La.—The Englewood, Alexandria & Southwestern Railroad Co. has filed its charter to build a line from Englewood in Madison parish, La., to Alexandria, La., about 100 miles. The officers are George Engel, president; Fred J. Metz, vice-president; Frank Hadden, second vice-president; Geo. P. Hummer, secretary and treasurer; Herman Engel, general manager; Edson Wilcox, superintendent. The directors are George Engel, Frank Hadden, Herman Engel, Edson Wilcox and Jeff Snyder.

Ansted, W. Va.—Reported that the Deepwater Railway Co. has let a contract to build extensive yards at Deepwater at a cost of about \$100,000. W. N. Page is chief engineer at Ansted. He writes the Manufacturers' Record, saying that this is practically correct, that eight tracks will be built, work now in progress. Tracks under construction will accommodate about 400 cars.

Ardmore, I. T.—Reported that the Oklahoma & Cherokee Central Railroad has begun construction of its line at Chelsea.

Augusta, Ga.—The Augusta & Florida Railroad Co. has, it is reported, elected officers as follows: President, Allen W. Jones of Midville, Ga.; vice-president and general manager, W. M. Blount of Union Springs, Ala.; secretary, Henry S. Jones of Hephzibah, Ga. The directors include the officers and J. T. Bothwell and A. M. Torbet. Jesse Thompson of Swainsboro, Ga., owner of the Swainsboro, Midville & Red Bluff Railway, is said to be interested, as the new line is practically an extension of his road from Midville to Keyesville, about 30 miles, connecting at the latter point with the Augusta Southern. It is said that track has been built to within nine miles of Keyesville.

Baltimore, Md.—The Baltimore & Ohio Railroad Co. informs the Manufacturers' Record that the contract for building a little more than three miles of track between Hollofields and Alberton, Md., has been awarded to Thomas A. Shoemaker & Co. of Pittsburg; value of the contract \$600,000 or \$700,000; construction to begin immediately. It is a double-track revision of line.

Bessemer, Ala.—Reported that a railroad company has been organized to build an electric railway connecting Bessemer, Jonesboro, Woodward and Dolomite. It would be about 12 miles long. Officers were elected as follows: W. W. Hollingsworth, president; J. E. Rodgers, vice-president; W. P. Gunn, secretary, and R. F. Smith, treasurer. F. A. Sawyer of New York is said to represent capital which may be invested in the enterprise.

Bristol, Tenn.—The Carolina Construction

Co. is reported to be pushing work on the extension of the South & Western Railway, starting near Marion, N. C. The South & Western is also said to be surveying from Marion to Rutherfordton, about 30 miles. John B. Newton is general manager at Bristol.

Brownsville, Texas.—George L. Edwards, Edward C. Elliott and Thomas W. Carter, all of St. Louis, Mo., and Duval West of San Antonio, Texas, are reported to have been elected directors of the Rio Grande Railroad, and it is further said that the sale of the line to B. F. Yoakum and others has been confirmed. An extension is expected. A. Celaya is president and general manager at Brownsville.

Bunkle, La.—The location survey for the Louisiana East & West Railroad is reported under way for a line from Bunkle via Cocodrie and Bayou Chicot to Ville Platte, 20 or 25 miles. Dr. W. D. Haas of Bunkle is president.

Carrollton, Ky.—Grading on the Worthville & Carrollton Railroad is reported nearly complete, and tracklaying is expected to begin within two weeks.

Charlotte, Tenn.—Survey is reported finished for the Tennessee Industrial Railroad from Fox Bluff to Florence, Ala., and it is said that construction will begin immediately on the line, which will be about 200 miles long via Charlotte, Pong Switch, Lovelville and Waynesboro, Tenn. J. R. Neblett, county surveyor at Charlotte, is engineer for the railroad, and W. C. Thorbus of Chicago is right-of-way man.

Charleston, W. Va.—The Kanawha & Michigan Railroad has filed a map showing the proposed extension along the Gauley river to the mouth of Meadow river, up which latter the line is to go. W. C. Franz is superintendent at Charleston, W. Va., and C. Buxton of the Toledo & Ohio Central Railroad at Toledo, Ohio, is chief engineer.

Chicago, Ill.—Mr. Elmer L. Gochanour, secretary and treasurer Mississippi Valley & Gulf Railway Co., 939 First National Bank Building, writes the Manufacturers' Record that the proposed line will be about 500 miles long, probably from Fort Madison, Iowa, to Little Rock, Ark. Construction will probably begin at or near Shelbina, Mo., within a few weeks. Contracts for grading and materials are now being closed. The other officers are: J. H. Osborne, president, 1025 to 1030 Unity Building, Chicago; W. I. Allen, first vice-president and general manager, 301 Home Insurance Building, Chicago; Theodore Rockefeller, second vice-president, 939 First National Bank Building, Chicago.

Clay, W. Va.—W. D. Janney, chief engineer of the Buffalo Creek & Gauley Railroad, is reported as saying that work is in progress from Avoca to Gauley, W. Va., 43½ miles, and that one mile of track is down.

Corsicana, Texas.—V. Watkins has applied for a franchise for an interurban railway to run from Corsicana to Fairfield.

Daleville, Ark.—The Ultima Thule, Arkadelphia & Mississippi Railroad, from Daleville to Sparkman, 26 miles, has been opened. C. G. Carpenter of Arkadelphia is general manager.

Denison, Texas.—President J. T. Cramer of the Denison & Sherman Railway gives notice that a stockholders' meeting will be held on September 18 at Denison to increase the capital from \$200,000 to \$300,000.

Dothan, Ala.—W. S. Wilson, contractor, is reported to have graded seven miles of the proposed Atlanta, Dothan & Gulf Railroad.

Durham, N. C.—The Buck's Creek & Catawba River Railway of Durham has been chartered; capital \$500,000. The stockholders and directors are C. Boyce, Abingdon, Va.; Geo. W. Edwards, Winston-Salem, N. C.; J. Crawford Biggs, Durham, N. C.; Leo D. Heartt, William B. Jones and Samuel J. Hinsdale, Raleigh, N. C. The road is to begin in McDowell county, eight miles from the mouth of Buck's creek, run down its valley to the Catawba river, along the latter to its north fork, up that valley to the North Toe river, thence along the latter to the point where it crosses the State line with Tennessee, thus passing through McDowell, Mitchell and Yancey counties. The total length is 100 miles.

England, Ark.—The Arkansas Cypress Shingle Co. writes the Manufacturers' Record saying: "We are not contemplating any extension of our line at present." This denies a recent press report that the Central Arkansas & Eastern Railroad would be extended.

Fourche, Perry County, Arkansas (mail via Esau).—Reported that the Fourche River Lumber Co. will now build its proposed railroad, having made an agreement for right of way.

Galveston, Texas.—Reported that the Gulf, Colorado & Santa Fe Railroad is surveying for an extension of the Jasper & Eastern Railway from Alexandria, La., towards Baton Rouge and New Orleans. C. F. W. Felt is chief engineer of the Santa Fe at Galveston.

Galveston, Texas.—The Union Passenger Depot Co. has bought seven lots of ground adjoining the station for the purpose of making an extension of track. C. F. W. Felt, chief engineer of the Santa Fe at Galveston, may be able to give information.

Greenville, Texas.—W. J. Hogue of Chicago, but formerly of Greenville, represents capitalists who propose to build the Interstate & Great Western Railroad from McKinney, Texas, via Denton, Decatur and Seymour, Texas, to Roswell and Ysleta, N. M.

Heath, S. C.—The Southern Power Co., which is reported to have absorbed the Catawba Power Co., it is stated, has started construction at Great Falls. The railroad, to be 10 miles long from there to either Fort Lawn or Bascomville, on the Lancaster & Chester Railroad, is being surveyed. W. A. Leland at Heath, S. C., is in charge of construction.

Hope, Ark.—Mr. G. Knobel, chief engineer of the Louisiana & Arkansas Railroad, is quoted as saying that 300 teams are employed grading from Winnfield to Alexandria, and it is expected to have the extension in operation by January 1.

Huntsville, Tenn.—Mr. W. O. Dyer, chief engineer of the Tennessee Railway, writes the Manufacturers' Record that bids have just been closed for 21 miles of new work this year. The contractors are William McD. Burgin & Co. of Marion, N. C., and Eskridge & Carroll of North Carolina and South Carolina. The line is now 13 miles long.

Indianapolis, Ind.—Mr. Thomas Taggart, president of the French Lick Springs Hotel Co., writes the Manufacturers' Record that the plan to build an electric railway from Memphis, Tenn., to Clarksville, Miss., is merely under discussion, and no definite steps have yet been taken about construction.

Jacksonville, Fla.—Mr. J. R. Parrott, vice-president and general manager Florida East Coast Railway, informs the Manufacturers' Record that the Atlantic & East Coast Terminal Co. is organized to do freight business.

Jacksonville, Fla.—Mr. J. D. Lawrence is reported as saying that contracts for building and equipping the proposed Jacksonville, Suburban & Seashore Railway have been closed, the financing being complete.

Jonesboro, Ark.—Reported that the Jonesboro, Lake City & Eastern Railroad will be extended to Luxora or Osceola, Ark.; also that J. E. Jones, one-third owner of the line, has sold his interest to John B. Driver and W. J. Driver of Luxora.

Lake Charles, La.—Reported that the St. Louis, Watkins & Gulf Railway, lately purchased by the Gould interests, will be extended 60 miles from Lake Charles to Beaumont, Texas. Henry B. Kane is general manager at Lake Charles.

Live Oak, Fla.—The Live Oak & Perry Railway Co. has been organized to build a line 165 miles long from Jacksonville, Fla., to St. Marks, Fla.; president, Thomas Dowling; first vice-president, R. L. Dowling; second vice-president, A. G. Patterson; treasurer, F. M. Dowling; secretary, O. D. McFarland.

Louisville, Ky.—The Louisville & Nashville Railroad may, it is reported, build an extension 12 miles long from Adairville, Ky., to Springfield, Tenn. W. H. Courtenay is chief engineer at Louisville.

Lyons, Ga.—A meeting of business men has, it is reported, decided to build the proposed Lyons & Altamaha Railroad immediately and to have subscribed capital for the work. It will be practically an extension of the Garbutt & Donovan Short Line. R. M. Garbutt, president, or W. O. Donovan, vice-president and general manager of the latter at Lyons, may be able to give information.

Macon, Miss.—T. W. Brame of Macon is reported to be interested in the proposition to build the proposed Vicksburg & Birmingham Railroad, chartered several years ago.

Memphis, Tenn.—The Crittenden Railroad Co., controlled by the Crittenden Lumber Co., will, it is reported, build a line from Earle, Ark., to Ithaca, Ark., about 15 miles. Frank E. Stonebraker, vice-president and manager of the lumber company, and W. A. Percy, both of Memphis, are interested. Application has been made for a charter; capital \$150,000; directors, Isaac Block, Wynne; C. T. Whitman, Earle; E. A. Rolfe, Forrest City; J. T. Hayden, Crawfordville; Lewis Barton, Marion.

Mena, Ark.—Construction is reported to have begun on the proposed Mena & Eastern

Railroad in which Col. C. C. Godman and others are interested.

Morgantown, W. Va.—The Morgantown & Kingwood Railroad is reported to have let the contract for its extension from Kingwood to Rowlesburg.

Norfolk, Miss.—The Natchez, Columbia & Mobile Railway is reported to have laid two miles of track on its extension from Booneville to Pearl River, seven and one-half miles.

Norfolk, Va.—Col. C. O. Haines and Adam Tredwell, both of Norfolk, are reported to be interested in the proposed North Carolina & Ohio Railroad Co., to build a line from a point in the center of North Carolina to the coast via Little Washington, Raleigh, Wilson and Greenville. Others interested are John S. Cunningham, Stephen C. Bragaw, Larry J. Moore, C. N. Brown and William Bragaw of North Carolina.

Norfolk, Va.—H. Fernstrom has been appointed chief engineer of the proposed Tidewater Railway to succeed Mr. C. P. Howard, resigned. Mr. Fernstrom is chief engineer of the New York Central Railroad, and will take charge of the Tidewater on August 1, having resigned his present position.

Oklahoma City, O. T.—The Oklahoma City Terminal Association has been chartered to build a terminal railway several miles long, the incorporators being T. D. Turner, J. H. Wheeler, I. L. Wilkin, W. W. Bierce, R. J. Edwards, J. M. Owen, A. H. Clasen, J. H. Johnson, John W. Shartell, G. B. Stone and George G. Schiberg.

Opelousas, La.—It is announced that the Opelousas, Gulf & Northeastern Railroad will begin construction by August 10. Bids are to be opened at Evansville, Ind., August 1. C. C. Genung is chief engineer of construction at Opelousas, where work will begin, and will be continued via Rayne and Crowley to Abbeville, La. Thomas H. Lewis, Sr., of Opelousas is president, and George T. Edwards, secretary.

Palestine, Texas.—Secretary Frank Morris of the Palestine Board of Trade writes the Manufacturers' Record that the Board has received letters from parties proposing an interurban railway from Palestine to Dallas, but that nothing definite has been done. He does not think that it will be difficult to interest sufficient capital in Palestine for a street railway.

Plant City, Fla.—The Plant City, Arcadia & Gulf Railroad, formerly the line of the Warnell Lumber & Veneer Co., is building an extension from Keyesville to Fort Green, about 20 miles. Thus far five miles are finished from Keyesville to Lillibridge. C. A. Root is president and general manager.

Port Arthur, Texas.—The Port Arthur & Houston Short Line Railroad Co. is reported to have let the contract for building the proposed line to Donovan & Wyatt. James P. Ward is vice-president and general manager, and C. S. Cleaver is general contractor.

Quitman, Ga.—President J. W. Oglesby of the South Georgia & West Coast Railway is reported as saying that work has not yet begun on the proposed extension from Perry to Lake Joseph, Fla., 16 miles.

Raleigh, N. C.—The Raleigh & Pamlico Sound Railroad has completed the heaviest 10 miles of its line and expects to be running trains by August 15. Grading is also in progress beyond, and it is expected that Wendell will be reached by November 1. Some of the grading will be let to other contractors.

Roanoke, Va.—The Norfolk & Western Railway has, it is reported, secured land for building second track east of Montvale, and is also building second track from Montvale three miles to Ironville. C. S. Churchill is chief engineer.

Sedwick, Ark.—The Cache Valley Railroad will, it is reported, build an extension 10 miles long from Crowley to Paragould, Ark. Construction is now under way from Light to Crowley, five miles. H. A. Culver is general manager at Sedwick.

Shreveport, La.—The De Soto Land & Lumber Co. proposes a railroad from Mansfield, La., to the Sabine river, about 18 miles. Location survey is now under way, about 10 miles being located. Grading is finished for six and one-half miles, and six miles of track are laid. E. A. Frost is president at Shreveport; A. J. Peavy, vice-president and general manager at Lufkin, Texas. J. S. Moore has the grading contract. McCarthy, Starnes & Co., Mansfield, La., are the engineers.

Shreveport, La.—The Shreveport & Northeastern Railway Co. is reported chartered to build a line from Shreveport to Memphis, Tenn., about 275 miles. Survey is in progress; capital \$2,000,000. President is A. K. Clingman of Shreveport; A. Kinnebrew of Homer, vice-president; J. B. Ardis, second vice-president; S. C. Fullilove, secretary, and Dr. T. E. Schumpert, treasurer, all of Shreveport.

St. Louis, Mo.—The Missouri Pacific is reported to be preparing to reduce grade on the Iron Mountain Division from Latour to Paragould, Ark., 107 miles. E. F. Mitchell is engineer of construction at St. Louis.

Sweetwater, Texas.—The O'Donnell Construction Co. is endeavoring to secure subcontractors to work on the Kansas City, Mexico & Orient Railway south of Sweetwater.

Tecumseh, O. T.—The Oklahoma Electric Railway Co. has been organized to build an electric railway from Tecumseh to Shawnee. The officers are Alfred Hare, president; Charles Blickensderfer, secretary and treasurer; E. J. Dickerson, E. T. Fullerton and E. M. Milburn, directors.

Tremont, La.—The Tremont & Gulf Railroad is reported to have finished a six-mile extension from Chathamville to Turpentine, La. W. G. Collar is general manager.

Washington, D. C.—Col. A. B. Andrews, vice-president of the Southern Railway, is reported as saying that the Blue Ridge Railway, of which he has just been elected president, will be extended from Walhalla, S. C., across the mountain to Maryville, Tenn. This might be by connection with the Tallulah Falls Railway at or near Clayton, Ga., that line being under construction to Franklin, N. C. W. H. Wells, engineer of construction of the Southern Railway at Washington, may be able to give information.

Washington, D. C.—The Southern Railway Co. is reported to be surveying for a detour freight route around Lynchburg, Va. The Northern Alabama Railway (controlled by the Southern) will, it is reported, build a line from Delmar, Ala., to Jasper, Ala., 30 miles. W. H. Wells, engineer of construction of the Southern Railway at Washington, D. C., can probably give information.

Wilmington, N. C.—A report from Monticello, Fla., says that the Atlantic Coast Line will build an extension from Monticello to Perry, Fla. E. B. Pleasants is chief engineer at Wilmington.

Street Railways.

Chester, S. C.—L. T. Nichols, R. B. Caldwell and J. H. Marion have applied for a street-railway franchise, but the town council has declined to grant the franchise at present. Mr. Nichols is general manager of the Carolina & Northwestern Railway.

Columbia, S. C.—Mr. William Elliott, Jr., has been elected second vice-president and general manager of the Columbia Electric Street Railway, Light & Power Co. to succeed Mr. P. I. Welles, resigned, and it is said that the company projects extensive improvements.

Elizabeth City, N. C.—Reported that the Elizabeth City Electric Light & Power Co. contemplates building an electric railway from Elizabeth City to a proposed new park on the Euclid Heights road about 2½ miles.

Fort Worth, Texas.—The Arlington Heights Traction Co. has filed its charter to build its proposed line, about six miles long, from Fort Worth to Arlington Heights and vicinity. The directors are A. V. Bauman of Fremont, Ohio; W. P. Engle and L. C. Cole of Defiance, Ohio; George E. Montgomery of Shreveport, La., and Leroy Smith of Fort Worth.

Oklahoma City, O. T.—Capitol Hill, one mile south of Oklahoma City, has granted a franchise to the Oklahoma City Street Railway to build a line there, which will be continued to Norman, O. T.

Somerset, Ky.—O. H. Waddle has, it is reported, been granted a 60-day extension for his street-railway franchise. It is said that arrangements have been closed to finance the road.

Winston-Salem, N. C.—The Winston-Salem Power Co. has been chartered and will, it is reported, build a street railway. The incorporators are H. E. Fries, F. H. Fries, C. D. Watson and Clement Manly, all of Winston-Salem.

Pittsburg Looks Southward.

The large iron and steel interests of Pittsburg are showing an increased interest in the Southern markets, and constant evidences of increased efforts to secure Southern business are being shown by Pittsburg interests. One of the latest moves in this direction is the action of the Pittsburg Steel Co., with general offices in the Frick Building at Pittsburg and plants at Monessen, Pa., in securing large warehouse facilities at Memphis, Tenn., that enjoy rail and water transportation facilities. This company will carry at Memphis a large stock of wire nails, barbed wire, field fence, black and galvanized wire, steel hoops, bands, cotton ties, etc. It has large facilities, and is putting out its various products under the brand of "Pittsburg Perfect."

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Barrels.—The Percival Wood Preserving Co., 107-108 Opera-House Building, Houston, Texas, wants prices on barrels.

Bed-factory Supplies.—Hubbard & Sheron, 17-19 Commerce street, Norfolk, Va., are in the market for iron frames for bed springs.

Boiler.—See "Ice Machinery."

Boiler.—See "Engine and Boiler."

Boiler.—See "Water-works."

Boiler.—See "Engine and Boiler" and "Electric-light plant Equipment."

Boiler Pump.—See "Pump."

Boilers.—See "Engines and Boilers."

Boilers.—See "Engines and Boilers."

Boilers.—The Percival Wood Preserving Co., 107-108 Opera-House Building, Houston, Texas, wants prices on boilers.

Bottling Machinery.—Wytheville Ice & Dairy Co., Wytheville, Va., wants prices on bottling machinery.

Box Machinery.—See "Woodworking Machinery."

Brick Machinery.—W. P. Robertson, Madison, Ga., wants information regarding the cost of machinery for making sand-lime brick; also the cost of making the brick.

Brick Machinery.—J. H. Merrill, Thomasville, Ga., wants addresses of manufacturers of machinery for making sand-lime brick.

Bridge Construction.—Contract will be let August 7 at public outcry in front of courthouse, Yazoo City, Miss., to lowest bidder by the Board of Supervisors of Yazoo county, Mississippi, for the construction of a bridge over Swift bayou near Como, Miss. Usual rights reserved; S. S. Griffin, clerk.

Bridge Construction.—See "Road Building, Bridges, etc."

Building Materials.—Lake Charles Lodge No. 165, A. F. & A. M., Adolph Meyer, secretary, Lake Charles, La., wants prices on building materials of all kinds.

Building Materials.—The Oney Gin & Mill Co., Oney, O. T., wants prices on lumber, brick and corrugated iron.

Building Materials.—A. R. Anderson, Tuckerman, Ark., wants prices on sawed limestone, steel girders and columns, builders' hardware, etc.

Building Materials.—Elba Hotel Co., F. P. Rainer, president, Elba, Ala., will want prices on metal shingles, bathtubs and water-closet fixtures.

Cans.—The Percival Wood Preserving Co., 107-108 Opera-House Building, Houston, Texas, wants prices on 1, 5 and 10-gallon cans.

Carriage-factory Equipment.—A. E. Wells, Kingsland, Ga., wants prices on machinery and equipment for carriage factory.

Car-works Supplies.—Mexican Car & Foundry Co., 404 Avenida Juarez, City of Mexico, is open for bids on all classes of iron, steel and other supplies needed in car works.

Casket-lowering Device.—The J. L. Roark Estate, Greenville, Ky., wants a new or second-hand casket-lowering device.

Cement.—Bids will be received at the office of the general purchasing officer, Isthmian Canal Commission, Washington, D. C., until August 5 for furnishing 20,000 barrels of Portland cement. Blanks and full information may be obtained at office of general purchasing agent or offices of the assistant purchasing agents, 24 State street, New York, N. Y.; Custom-house, New Orleans, La.; also from chief quartermaster, Department of the Lakes, Chicago, and the Commercial Club, Mobile, Ala.; D. W. Ross, general purchasing officer.

Cornmeal Mill.—Hughston Bros., Plano, Texas, will be in the market for cornmeal mill.

Drain Tile.—Matthew & O'Brien, 413 Southern Building, Wilmington, N. C., wants prices on farm drain tile.

Electrical Equipment.—The Percival Wood Preserving Co., 107-108 Opera-House Building, Houston, Texas, wants prices on electric motors.

Electrical Equipment.—Lake Charles Lodge No. 165, A. F. & A. M., Adolph Meyer, secretary, Lake Charles, La., wants prices on electrical equipment.

Electrical Equipment.—Henry B. F. Macfarland and Chester Harding (acting), Commissioners, Washington, D. C., will receive bids until August 23 for furnishing and erecting switchboards, tablet boards and cabinets for the electric plant at the sewerage pumping station, sewage-disposal system. Specifications and blank forms can be had on application. Usual rights reserved.

Electric-light Plant.—P. R. Willis, Bel Air, Md., will want estimates on electric-light plant for hotel.

Electric-light-plant Equipment.—E. E. Fullerton, Greenvue, Ky., wants prices on engine, boiler and electrical dynamo and equipment for electric-light plant of 1200 lights.

Electric-light Plant, etc.—Maryland Heat, Light & Power Co., Andrew Westervelt, secretary and manager, 320 West Mulberry street, Baltimore, Md., will be in the market for steam and electric machinery to the extent of 300 horse-power, poles, wires, line equipment, conduit system and underground cables for electric light, power and heating plant.

Electric Travelling Crane.—Henry B. F. Macfarland and Chester Harding (acting), Commissioners, Washington, D. C., will receive bids until August 21 for furnishing one 15-ton electric traveling crane for the sewerage pumping station, sewage-disposal system, District of Columbia. Specifications and blank forms of proposal may be obtained on application. Usual rights reserved.

Electric Wiring.—See "Building Note" under Owensboro, Ky.

Elevator Platform.—The Paducah Construction Co., 118 South 4th street, Paducah, Ky., wants a second-hand elevator platform, 7x12.

Engine.—Eureka Furniture & Manufacturing Co., Wm. Gratznowsky, general manager, 414 West 15th street, Manchester, Va., wants a 100-horse-power engine.

Engine and Boilers.—Penn Bros. Company, Leavenworth, Kan., wants prices on engines and boilers.

Engine and Boiler.—E. E. Fullerton, Greenvue, Ky., wants prices on engine and boiler. (See "Electric-light-plant Equipment.")

Engine and Boiler.—Bragaw Fertilizer Co., Washington, N. C., wants prices on engine and boiler.

Engine and Boiler.—See "Ice Machinery."

Engines and Boilers.—W. P. Robertson, Madison, Ga., will be in the market for three steam engines of 15, 20 and 40 horse-power, two 40-horse-power return tubular boilers and one 50-horse-power return tubular boiler; either new or second-hand.

Engines and Boilers.—Maryland Heat, Light & Power Co., Andrew Westervelt, secretary and manager, 320 West Mulberry street, Baltimore, Md., will be in the market for engines and boilers.

Engines and Boilers.—Lake Charles Lodge No. 165, A. F. & A. M., Adolph Meyer, secretary, Lake Charles, La., wants prices on engines and boilers.

Engraving Machine.—The J. L. Roark Estate, Greenville, Ky., wants a new or second-hand machine for engraving jewelry, novelties, coffin plates, etc. Give full particulars and lowest cash price.

Fertilizer-factory Equipment.—Bragaw Fertilizer Co., Washington, N. C., wants prices on a dry-mixing fertilizer plant complete, 100 tons capacity.

Fertilizer-factory Equipment.—Southwestern Mining & Chemical Co., Charlottesville, Va., will be in the market in the fall for machinery and equipment for fertilizer factory.

Filtration Plant.—See "Water-works."

Fire-department Supplies.—Bids will be received until August 8 at the office of J. B. Winslett, city secretary, Dallas, Texas, for furnishing the fire department with a hose wagon according to specifications on file with the chief of the fire department, and 3000 feet of 2½-inch cotton rubber-lined fire hose. The city reserves usual rights.

Furniture.—The City of Palatka, Fla., H. A. Davis, chairman of committee, wants prices on desks, chairs, etc., suitable for council and clerk rooms.

Furniture-factory Equipment.—Eureka Furniture & Manufacturing Co., Wm. Gratznowsky, general manager, 414 West 15th street, Manchester, Va., wants one swing cut-off saw, edger, rip saw, glue jointer, planer, sander (36-inch), nine-inch four-side molder, double-end tenoner, two-spindle one-

inch shaper, 36-inch band saw, horizontal and upright double-boring machine, sand drum, carving spindle, dovetail machine, veneer clamp, case, drawer and bed clamps, etc.

Gearing.—Thomasville Iron Works, Thomasville, Ga., wants addresses of manufacturers of small gears.

Grinding Machinery.—H. F. Head, Bonnieville, Ky., wants prices on machinery for grinding tripoli.

Hardware.—See "Printing Presses, etc."

Heating Apparatus.—See "Building Note" under Owensboro, Ky.

Heating Apparatus.—John H. Pearson, president board of trustees Morganton Graded School, Morganton, N. C., wants bids on hot-water heating apparatus for school building.

Heating Apparatus.—Rev. G. W. Ray, pastor First Congregational Church, Fort Worth, Texas, wants estimates on heating apparatus (steam preferred).

Heating Plant.—See "Electric-light Plant, etc."

Holisting Equipment.—D. A. Layton, Marion, S. C., wants one double-drum skidder without boiler, 1500 feet five-eighths-inch wire rope, 1500 feet one-half-inch wire rope to pull cars of clay out of clay pit and pull empty cars back; new or second-hand.

Ice Machinery.—Kelly-Jones Ice & Cold Storage Co., Gulfport, Miss., wants prices on 36-ton ice machine with engine and boiler complete.

Ice Machinery.—W. L. Schofield, Frostburg, Md., wants to correspond with manufacturers of ice machinery from 1 to 30 tons capacity.

Ice Plant.—H. R. Bright, Washington, N. C., wants estimates on 25-ton ice plant.

Iron Frames.—See "Bed-factory Supplies."

Irons.—J. H. Dillon, 769 South Ervay street, Dallas, Texas, wants addresses of manufacturers of self-heating irons, that is, laundry irons that are heated by gasoline or charcoal.

Irrigating Machinery.—Walter Hurst, Kahuku, Hawaii Islands, wants catalogues and price-lists on irrigation pumps and machinery.

Laundry Equipment.—See "Irons."

Laundry Machines, etc.—Bids will be received until August 25 at the office of D. W. Ross, general purchasing officer, Isthmian Canal Commission, Washington, D. C., for furnishing laundry machines, iron pipe and pipe fittings, lead pipe, valves, etc. Blanks and full information may be obtained at office of general purchasing agent, Washington, D. C., or the offices of the assistant purchasing agents, 24 State street, New York, N. Y.; custom-house, New Orleans, La.; 36 New Montgomery street, San Francisco, Cal., and 409 Chamber of Commerce, Tacoma, Wash.; also from chief quartermaster, Department of the Lakes, Chicago, and the Commercial Club, Mobile, Ala.

Laundry Supplies.—A. P. Edgerton, Chipley, Fla., wants addresses of manufacturers of laundry supplies.

Levee Work.—Board of Commissioners of the Lafourche Basin Levee District, 401 Cotton Exchange Building, New Orleans, La., will receive bids until August 1 for the enlargement of the Star levee, parish of Plaquemine. Deposit required, \$110; bonds required, \$250. For further information apply at the office of the board or to the board of State engineers, Room 402, Cotton Exchange Building, New Orleans, La. Usual rights reserved.

Levee Work.—Board of Commissioners of the Bossier Levee District, Bossier, City, La., will receive bids until August 3 for the construction of the following new levees in the parish of Bossier: Magenta, approximate contents 70,000 cubic yards; deposit required, \$25; bond required, \$500. Gold Dust, approximate contents 26,000 cubic yards; deposit required, \$110; bond required, \$1300. Cash or certified check to the amount of deposit required must accompany each bid. Other information as to location, character of work, terms of payment and blank forms for proposals may be obtained at the office of W. T. Colquitt, president of board at Bossier City, and at the office of the board of State engineers, New Orleans, La. Usual rights reserved.

Liquid Mixers.—The Percival Wood Preserving Co., 107-108 Opera-House Building, Houston, Texas, wants prices on liquid mixers.

Machine Builders.—J. B. Underwood, Fayetteville, N. C., wants to correspond with manufacturers relative to contracting for the manufacture of a patent cotton harvester. Contractor must have well-equipped shop and be prepared to duplicate machines in quantity as wanted. Working drawings to be made by shop draughtsman and ap-

proved by Mr. Underwood, from which the shop will be expected to make perfect working parts.

Machine Tools.—Bids will be received at the office of D. W. Ross, general purchasing officer, Isthmian Canal Commission, Washington, D. C., until August 22 for furnishing steam hammers, radial drills, grinding, boring and pipe-cutting machines and pulling and track jacks. Blanks and full information may be obtained at office of general purchasing agent, Washington, D. C., or the offices of the assistant purchasing agents, 24 State street, New York, N. Y.; customhouse, New Orleans, La.; 36 New Montgomery street, San Francisco, Cal.; and 409 Chamber of Commerce, Tacoma, Wash.; also from chief quartermaster, Department of the Lakes, Chicago, and the Commercial Club, Mobile, Ala.

Metal Letters, etc.—H. J. Morris, Live Oak, Fla., wants prices on metal letters and emblems.

Mill Supplies.—Eureka Furniture & Manufacturing Co., Wm. Gratznowsky, general manager, 414 West 15th street, Manchester, Va., wants 200 feet two-and-five-sixteenths-inch shafting, post hangers, compression couplings, split pulleys, etc.

Mill Supplies.—Carpenter, Taylor & Co., Rutherfordton, N. C., are in the market for 51 lineal feet 2-1/2 inch shafting, six post hangers 2-1/2 inch and three clamp couplings 2-1/2 inch; second hand.

Mining Machinery.—Southwestern Mining & Chemical Co., Charlottesville, Va., will be in the market in the fall for machinery for mining phosphate, graphite and other minerals.

Oil Refinery Equipment.—Robert H. Traylor, Del Rio, Texas, wants addresses of firms dealing in machinery for the manufacture of oil.

Oil Refinery.—Robert Moore, Waco, Texas, wants estimates of cost of an oil refinery complete, capacity of 100 to 200 barrels daily of high-grade oil.

Office Furniture.—Southern Supply Co., Gravette, Ark., wants a line of office furniture.

Paint Machinery.—Southwestern Mining & Chemical Co., Charlottesville, Va., will be in the market in the fall for machinery and equipment for the manufacture of mineral graphite paint.

Paper Machinery.—See "Shipping-tag Machinery."

Paper Mills.—O. L. Hardgrave, Boca Raton, Fla., wants to correspond with paper mills making bank-note and parchment paper.

Paving.—Bids will be received by the Board of Aldermen, Kinston, N. C., until July 31 for constructing brick-paved street and supplying material for same; extent of proposed work approximately 17,000 yards brick pavement and 6000 linear feet of granite curbing. For specifications and forms of proposals address John W. Hays, 3 South Adams street, Petersburg, Va. Usual rights reserved; N. J. Rouse, mayor.

Pipe-cutting and Threading Machine.—A. V. Kaiser & Co., 222 South 3d street, Philadelphia, Pa., wants pipe-cutting and threading machine, capacity 2-inch to 8-inch; must be complete and in good order. State age, maker's name and lowest cash price.

Piping.—See "Water-works."

Piping.—See "Water-works."

Plumbing.—See "Building Note" under Owensboro, Ky.

Plumbing.—Elba Hotel Co., E. P. Rainer, president, Elba, Ala., will want prices on bathtubs and water-closet fixtures. (See "Building Materials" item, Elba Hotel Co.)

Printing Presses, etc.—Bids will be received until August 17 at the office of the general purchasing officer, Isthmian Canal Commission, Washington, D. C., for furnishing printing presses, door bolts, hinges, iron brackets, hooks and eyes, round iron, brooms, cotton duck, pipe jointers, wire rope, etc. Blanks and full information may be obtained at the office of purchasing agent, Washington; assistant purchasing agents, 24 State street, New York, N. Y.; customhouse, New Orleans, La.; 36 New Montgomery street, San Francisco, Cal.; and Tacoma, Wash.; also from chief quartermaster, Department of the Lakes, Chicago, and the Commercial Club, Mobile, Ala.; D. W. Ross, general purchasing officer.

Pump.—Eureka Furniture & Manufacturing Co., Wm. Gratznowsky, general manager, 414 West 15th street, Manchester, Va., wants a pump for 125-horse-power boiler.

Pumphouse Machinery.—See "Reservoir, etc."

Pumping Plant.—See "Water-works."

Pumps.—See "Irrigating Machinery."

Pumps.—See "Water-works."

Railway Equipment.—Gibbs Machinery Co., 804 West Gervais street, Columbia, S. C., wants prices on about a mile and one-half of 16-pound or 18-pound repaving T rail, complete with spikes and joints, f. o. b. Pactolus, N. C.

Railway Equipment.—D. A. Layton, Marion, S. C., wants a new or second-hand steam tram engine, weight from four to eight tons.

Railway Equipment.—H. A. Rankin, Roseboro, N. C., wants quotations on about one mile of 16 or 20-pound relaying rails.

Railway Equipment.—The Mississippi Valley & Gulf Railway Co. is in the market for all kinds of material and supplies necessary for the construction and operation of a first-class railway. Address Superintendent of Construction, Shelbyville, Mo.

Refrigerating Machinery.—Samuel Cohn & Son, 108 East Walnut street, Goldsboro, N. C., wants addresses of manufacturers of machinery for cold-storage plant.

Reinforced Concrete.—Bids will be received until September 9 at the office of J. C. Meredith, constructing engineer, Florida East Coast Railway, Miami, Fla., for the construction and completion of reinforced concrete arch work involving the expenditure of about 125,000 cubic yards of concrete on the extension of the Florida East Coast Railway, as follows: 45,000 cubic yards at Knight's Key channel, 45,000 cubic yards at Moser channel, 35,000 cubic yards at Bahia Honda. Specifications, forms of proposal and particulars may be obtained on application. Certified check for 2 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Reservoir, etc.—Capt. B. B. Buck, Sixteenth Infantry, constructing quartermaster, Fort McPherson, Ga., will receive bids until August 15 for furnishing all labor and materials necessary and constructing here reservoir, pumphouse and installing machinery for air-lift system and making connections with deep wells and water systems. Full information furnished on application. United States reserves usual rights.

Revetment Work.—Sealed bids will be received until July 31 by J. S. Brady, chairman executive committee, joint organization Atchafalaya basin and Lafourche levee boards, Cotton Exchange Building, New Orleans, La., for the construction of pile revetment along the banks of Bayou Lafourche at Donaldsonville, La. Certified check for \$300 must accompany each bid. For form of contract, specifications, blank bids and all information apply to the board of State engineers, Cotton Exchange Building, New Orleans, La. Usual rights reserved.

Road Improvements.—Washington County Commissioners, Hagerstown, Md., will receive bids until August 8 for grading and macadamizing 1.6 miles of road between Hancock and Mason and Dixon's line, to be built under State supervision according to the plans and specifications on file at the office of the county commissioners, Hagerstown. All proposals must be made on the regular forms furnished by the State geological survey commission, to be obtained through the office of the county commissioners. Bids otherwise made out will not be received. Certified check for \$200 must accompany each bid. Usual rights reserved; John E. Wagaman, clerk.

Roofing.—H. J. Morris, Live Oak, Fla., wants prices on gravel roofing.

Sand Screens.—The Premier Sand & Brick Works, Northport, L. I., wants addresses of manufacturers of sand screens.

Saw-mill.—W. P. Robertson, Madison, Ga., will be in the market for either a new or second-hand saw-mill of 10,000 feet capacity.

Saw-mill.—Frank Wright, Cave Springs, Ga., wants to purchase a small saw-mill; new or second-hand in good condition.

Saw-mill.—H. A. Brintuelle, Sylacauga, Ala., is in the market for a small automatic saw-mill for cutting broom-handle stock from the round.

School Furniture.—Board of Education of Pierce county, Georgia, will probably be in the market for school supplies, desks and seats for about 30 schoolhouses. Address J. A. Harper, county school commissioner, Blackshear, Ga.

Sewing Machines.—Southern Supply Co., Gravette, Ark., wants a line of sewing machines.

Shipping-tag Machinery.—S. L. Cochran, P. O. Box 1001, Fort Worth, Texas, wants addresses of manufacturers of machinery for making shipping tags.

Snuff Machinery.—P. O. Box 941, Atlanta, Ga., wants prices on machinery for the manufacture of snuff.

Thread-cutting Machinery.—G. M. Davis & Son, Palatka, Fla., wants to correspond with

manufacturers of machinery for rolling threads on round rods.

Tobacco.—P. O. Box 941, Atlanta, Ga., wants prices on tobacco.

Vehicles, etc.—Southern Supply Co., Gravette, Ark., wants a line of carriages, wagons and harness, etc.

Water-works.—Proposals will be opened August 8 by D. H. Menough, chairman of borough council, Oxford, Pa., for the installation of steel standpipe, boiler, brick and concrete foundations, pumping station, complete pumping apparatus (steam or gas driven) and certain 12-inch water mains laid in position as per revised plans and specifications of the York Engineering Co., York, Pa. Plans can be seen at Mr. Menough's office or can be obtained on deposit of \$10 to secure return. Address all communications to Mr. Menough.

Water-works.—The Mayor and Board of Aldermen, Hammond, La., will receive bids until August 8 for the construction of water-works. Certified check for 5 per cent. of amount of bid must accompany each bid. For synopsis of the specification, instructions to bidders and form of proposal address Jas. B. Adams, town clerk; C. H. Jenks, Fayette, Miss., engineer.

Well Drilling.—Bids will be received until August 14 at the office of Ike Cohen, city secretary, Victoria, Texas, for sinking an eight-inch artesian well at a point to be designated by the city. All bids submitted shall be based on a price per foot approximating 1200 feet and all pipe used to be best grade. Certified check for \$100, payable to J. H. Schneider, mayor, must accompany each bid. Usual rights reserved. For information address Ike Cohen, city secretary.

Woodworking Machinery.—Alex. J. Field, Raleigh, N. C., wants catalogues and prices of dovetail or lock-corner box machines.

Woodworking Machinery.—W. P. Robertson, Madison, Ga., will be in the market for one gang edger and one four-side wood planer; new or second-hand.

Woodworking Machinery.—A. E. Wells, Kingsland, Ga., wants prices on machinery and equipment for variety works.

Woodworking Machinery.—See "Saw-mill."

Woodworking Machinery.—W. W. Walwright, Palestine, Texas, will be in the market for woodworking machinery, including cabinet planer, band resaw, four-side molder, etc.

Woodworking Machinery.—See "Furniture-factory Equipment."

Big Flooring Contracts.

The hardwood flooring manufactured by the South Side Lumber Co. of Chicago continues to be in large demand. The company has received about \$20,000 from the Thompson-Starrett Company for an order calling for 692,640 feet of 3/4x2 1/2-inch face select No. 1 common maple flooring, which was used in the Sears-Roebuck Building now in course of construction. This is about \$28 per 1000. The South Side Lumber Co.'s deliveries in June amounted to over 1,000,000 feet for Chicago alone and about 312,000 feet for outside shipments.

INDUSTRIAL NEWS OF INTEREST

A Steel-Building Contract.

In connection with improvements being provided for the Lombard Iron Works & Supply Co.'s plant at Augusta, Ga., there will be a large extension to the foundry and boiler-shop steel building. Contract for this extension work has been awarded to the American Bridge Co. of New York.

Obermayer in New York.

The S. Obermayer Company, manufacturers of foundry facings and supplies, of Cincinnati, Chicago and Pittsburg, announce they have opened an office at 120 Liberty street, New York. Edgar G. Seaman, who has represented the company at Pittsburg for many years, has charge of the New York office.

A Timber Proposition.

An excellent opportunity in the timbering industry is offered by the Realty Investment Co., Porter Building, Memphis, Tenn. This company offers for sale 375,000,000 feet of pine timber, with 25 miles of standard-gauge railway, 3 locomotives, 20 timber cars, saw-mills, dry-kilns, sheds, live-stock, ocean tug, etc. Write for full details.

A 50-Barrel Mill.

The flour mill which S. E. Bonsack of Bonsacks, Va., offers for sale, and which was recently noted in this column, has a daily capacity of 75 barrels, not 50 as was stated. In fact, the mill has been tested to over 100 barrels of flour daily. The plant is of Nor-

MEXICO.

Brick Works.—The Yucatan Brick Co., which was incorporated recently with capital stock of \$50,000, will build a brick-manufacturing plant near Merida, Yucatan. Its incorporators were William H. Walton of Newark, N. J.; Lindsey Morris of Philadelphia, Pa., and Francis N. Whitney of New York city.

Car Works.—The Mexican Car & Foundry Co., 404 Avenida Juarez, City of Mexico, expects to have its new plant in full operation by August 1, producing several standard cars daily, besides small cars and other classes of equipment. The company is open for bids on all classes of iron, steel and other materials which it does not make and which cannot be purchased in Mexico for the plant.

Cotton Mill.—The cotton-manufacturing plant known as the Fabrica de Hilados at Monclova was destroyed by fire last week, the loss being more than \$200,000 and the insurance amounting to approximately that sum. Otto Degetau of Monterey, New Leon, Mexico, owned the plant.

Distillery.—V. H. Hobson of Richmond, Ky., and L. S. Fitzhugh of Wilmore, Ky., are completing arrangements for the erection at Guadalajara, Jalisco, of a whiskey distillery, for which they received concessions recently.

Iron Works.—W. H. Ellis of New York city, now registered at the Gillow Hotel, City of Mexico, is organizing a company to establish a modern iron-works plant at Monclova, Coahuila. The capital stock will be \$500,000 (gold), and New York capitalists will be interested.

Overall Factory.—C. E. Farnsworth of Denison, Texas, will establish an overall factory in Monterey, New Leon, Mexico. This plant will have a daily capacity of 300 suits, and branches will probably be established in other cities.

Shoe Factory.—The Compania Industrial y Agricola, Mazatlan, Mexico, is about to order machinery for doubling its capacity; present output 400 pairs of fine quality and 400 pairs of cheap quality. Juan Bernardo Kelf is manager.

Railways.

Steam Railroad.—Reported that Carlos Romero, a mineowner, will close a contract with Governor Ahumada of the State of Jalisco to build a railroad from Hostotitpan to Etzatlán. The line will be about 50 miles long and will be known as the Mololoa Mining Railroad.

Steam Railroads.—Reported that the Mexican government will shortly announce two railroad concessions—one to W. G. Seaver for a line from Merida to the City of Mexico and another to J. A. Naugle to extend the Sonora Railway along the west coast to Guadalajara.

Electric Railway.—A second extension of time has been granted to Benjamin Barrios, attorney, representing the Mexico & Puebla Railway Co., for commencing work on the proposed electric road from the City of Mexico to Puebla. The survey must be completed and the line located by January 17, 1906.

dyke & Marmon build. Purchasers likely to be interested in this property are invited to write for full details.

Industrial Opportunities.

The Wytheville Foundry and Machine Works of Wytheville, Va., is offered for sale or for enlargement. It is an established enterprise, and investors are invited to investigate the proposition as one offering profitable returns. The Southwestern Virginia Land Agency of Wytheville can be addressed for information. This Agency also offers for sale tracts of bluegrass land in Southwest Virginia.

Selling Coal Property.

For the purchase of a small coal-mining operation on the line of the Norfolk & Western Railroad in Mingo county, West Virginia, an offer is presented by J. F. Ratcliff, 1018 Third avenue, Huntington, W. Va., who will be pleased to give particulars regarding the property. It consists of a 30-year lease on 600 acres of land, together with miners' houses, store building, tipples, tracks, mine cars, etc.

Coal Lease for Sale.

An opportunity that should not be overlooked by those who are interested in such investments is that of purchasing a lease of 150 acres of coal lands in Southwest Virginia on the line of the Norfolk & Western Railway, particulars of which will be ex-

plained by addressing Drawer 13, Knoxville, Tenn. The coal underlying this tract is of the same veins that are being worked at Tom's Creek and Crane's Nest.

Big Dam Contracts.

Contracts have been awarded to the Ambursen Hydraulic Construction Co. of Boston for the building of two dams, respectively 230 feet long by 21 feet high and 400 feet long by 13 feet high, in Northeastern Pennsylvania. The development is a private enterprise, and by means of flumes and penstocks the water will be worked off over a head of 560 feet, using Pelton wheels. This is one of the first-class high-head propositions in the East.

The Iron City Steel Co.

H. B. Jawkes, who for the last four years has been interested in and manager of the rail business of Hyde Bros. & Co., announces that he has severed his connection with that enterprise and organized the Iron City Steel Co. This company will handle new and re-laying rails and other iron and steel products, and invites buyers to write for prices before placing contracts elsewhere. The new company has its offices in the Bessemer Building, Pittsburg, Pa.

Farming and Timber Lands.

Purchases of timber lands for development and of farming lands for colonization purposes are very active in the South at the present time; in fact, there is such a large demand for properties of this kind that some dealers find it difficult to promptly supply their clients' needs. Messrs. Mason, Miranda & Co., 231 Atlantic Building, Norfolk, Va., state that they have inquiries from 150 lumber firms in the North and South for timber and inquiries for 1000 farms and for colony lands. Owners of lands which they may want to dispose of can correspond with the firm to advantage.

Building Contracts in London.

The J. G. White Company interests are creating considerable comment in London building circles. It is obtaining some of the most important contracts awarded in the English metropolis, its latest contract being for the erection of an apartment-house adjoining the French embassy on Knight's bridge, facing Hyde Park. The office building of the International Navigation Co. and the new Ritz Hotel are also being built by the J. G. White Company in accordance with advanced American engineering and contracting practice. The J. G. White Company's American offices are in New York.

Patent Granted F. E. Myers & Bro.

The excellent satisfaction given purchasers of the Myers sure-grip sling unloader for double-rail steel track has created a demand for a sling carrier that would operate on the single-rail steel track manufactured by this firm. To meet this demand P. A. Myers has developed a carrier of the general type of the sure-grip sling unloader for double rail, but designed to operate on single rail. July 18, 1905, the Patent Office granted Mr. Myers patent No. 795,001, covering a carrier designed to operate on single-rail track. This carrier embodies all the proven features of the sure-grip double-rail sling unloader, but capable of operation on single rail.

To Obviate Envelope Licking.

One of the most useful office specialties recently seen is the unique water pad devised by the McEwen Lumber Co. of Asheville, N. C. This pad has been developed simply to meet a necessity in the company's office, because nothing on the market was found to be so convenient, simple and always ready for use. It is in the form of the standard pad for rubber stamping. By merely soaking the pad in water at first for half an hour, and then occasionally to keep moist, it is ready for use. Instead of licking your envelope, you simply press the gummed surface on the damp pad. The new device is being manufactured by the Unique Water Pad Co. of Asheville, N. C.

Concrete-Steel Dam.

Mr. A. A. Low will build on his estate at Horseshoe, N. Y., in the Adirondacks, a concrete-steel dam across Bog river, including power-house and penstocks for generating power and transmitting same to his saw and planing mill two miles distant on the railroad. The novel feature of the construction is that the dam will also serve as a railroad bridge to carry over his standard-gauge logging road. For this purpose the buttresses project up through the body of the dam and carry the track at a clear elevation of five feet above the railroad. The contract for all the above work, including about a mile of railroad and the transmission lines, has been awarded to the Ambursen Hydraulic Construction Co., Boston, Mass.

William Jessop.

Iron and steel interests will regret the announcement that has been made of the death of William Jessop, chairman of William Jessop & Sons, Limited, steel manufacturers, Sheffield, England, and president of the Jessop Steel Co., Washington, Pa. Mr. Jessop died at his country estate, Thornsett Lodge, Bradfield, England, on July 4. He was well known to the trades of both Great Britain and America, and held in high esteem for his knowledge of iron and steel manufacturing, as well as for his sterling character. Besides his direct connections, he was interested in various industrial enterprises and prominent in several charitable institutions, being at the time of his death president of the Jessop Hospital for Women, founded by his father.

Water-Power for Sale.

One of the most important phases of Southern industrial progress at present is the development of water-power properties. While many such have been utilized, there yet remain numerous others awaiting the active men who will develop them and establish manufacturing plants. In Georgia there is a water-power property, capable of furnishing 500 horse-power, which the owner offers for sale. The power is located near timber and rock quarries, and is an ideal property for cotton-manufacturing purposes. The Central of Georgia Railway crosses the falls, and the legal titles to the land and riparian rights are said to be perfect. W. P. Robertson of Madison, Ga., offers this power and is prepared to send full details to inquirers.

A Hand-Power Baling Press.

Many industrial workers will be interested in a new hand-power baling press being introduced by the inventor, Jas. R. Pumphrey of Dellwood, Fla. This press bales anything that is balable, making light or heavy bales. It works in the field or in the barn, on the wagon or on the ground, pulls the bales, and has a capacity from two to three tons daily. The power wheel is rotated to wind two ropes upon a winding shaft, thus pulling the follower forward and baling the hay in the front end of the compression chamber. Reversing the wheel unwinds the ropes and winds a small rope on the extended end of the shaft, thus throwing the follower back to the rear end of the press, which opens the compression chamber for another charge of hay. There are no castings or springs in the baler. Write Mr. Pumphrey for further facts regarding his device.

For Lubrication Troubles.

The longer an engineer uses Albany Grease the more convinced he becomes that it is truly a panacea for all lubrication troubles. Messrs. Adam Cook's Sons, 313 West street, New York, the only makers, have received a letter from L. L. Moses, chief engineer of the United States hydraulic dredge, Jacksonville, which is of decided interest in this connection, and reads: "I am a regular user of your product, and have always had the best of success with it. I am chief engineer of the United States hydraulic dredge Jacksonville, working on St. Johns river, Florida, and both of my assistant engineers, as well as myself, swear by Albany Grease. We use it on main engine and all auxiliaries, and as we have 33 steam cylinders, we have ample opportunity to watch its work under different conditions. Am at present home on leave of absence, but I left the boys a plentiful supply of Albany Grease."

A Mine Water Car.

It should be well known to all operators of dry mines that coal dust constitutes possibly the greatest danger to which the miner is exposed. This has resulted in the introduction of a mine water car for the prevention of dust explosions in coal mines, and some of the best-known mining companies in the South have tried the car and found it highly satisfactory. One of these cars was thoroughly tested in the mines of the Roane Iron Co. at Rockwood, Tenn., and it was found that after the mine was sufficiently wet, an application a few times a month was enough to keep the mine free from dust and in a safe condition. The Rockwood mine water car consists substantially of a tank car inclosing a force pump. This pump can be operated either by hand power or by a connection with the wheel of the car while same is in motion. The tank holds about 300 gallons, and can be filled from a pump or other source of supply by the pump and hand lever with the proper arrangement of valves. Messrs. Richards & Sylvester of Rockwood, Tenn., are manufacturing the Rockwood mine water car.

Opportunities in Brick-Making.

There has probably never been a time when the building-construction industry was

so active as at present. Reports from all over the United States tell of the unusual number of modern structures being erected, and this naturally is creating a greatly-increased demand for building materials of all kinds. Bricks are among the materials in large consumption, and the new system of making them from sand and lime has been a potent factor in enabling contractors and building-owners to proceed with their work. Sand-lime bricks have many advantages, all of which are becoming known—better known every day. The cheapness of the process and the fact that bricks formed and dried one day can be put in the wall the next day are features which are very valuable. Architects, building-erectors and others interested know the facts. Machinery used in making the sand-lime bricks is a specialty of the Semisteel Company of Cleveland, Ohio. This company invites requests for information regarding the opportunities in brick-making by the sand-lime process. It can give you some important and valuable information in this direction.

New System Lumber Markers.

Every lumber pile should be marked, showing the grade, thickness, length, date piled and other data. There are various ways of marking lumber, all well known to the trade. The A. E. Baird Lumber Co. of Nashville, Tenn., offers a new system, using steel-japanned lumber markers. The system is simple, quick to adjust, lasting and cheap. The marker is made of steel, japanned finish, to prevent rusting. There are two sizes, $\frac{3}{4} \times 2\frac{1}{4}$ and 1×3 inches open space, for describing the lumber, on Manila water-proof card with marginal lines. The cards can best be marked with a lead pencil, which will stand the weather for a year or more and not grow dim. Mark the card with pencil, place it in the marker and insert the diamond or V point of the marker at the thin edge of a board; push it the tight way until marker is made fast. It is all done in a second. The marker then remains more firmly fixed than if nailed to the pile. It is adjusted for marking lumber in the stack or bulk, in sheds or dry-kilns, rough or dressed, and is indispensable to large or small dealers. The marker can be used over and over again, being practically indestructible. These markers were first offered for sale last November, and the system has already been adopted by some of the largest wood concerns in the United States and Canada. Write for further details.

Electric Decorations at Buffalo.

At the recent convention of the Elks in Buffalo one of the most prominent features of the decorations in the city was a "Mercury Arc Tower." This was a fluted column of staff 75 feet high, studded with 100 mercury arc lamps. Standing alone in its splendor, this tower produced a most startling effect, due largely to the characteristic greenish light of the mercury arc lamps. It stood out conspicuously. The natural curiosity of the people regarding its peculiar color caused a constant jam about its base. Inasmuch as the tower was visible for a long distance up the streets leading from the square, it received a great deal of attention and was freely spoken of as the most original feature of the carnival. The mercury arc lamps were operated in two series of 50 lights each from four-ampere Brush arc machines. As each lamp consumes only 160 watts, the operating expense was extremely low for so brilliant a spectacle. About 4000 lamps were used. They were of the standard type for outdoor lighting as developed under the direction of Dr. Steinmetz and manufactured by the General Electric Co. of Schenectady, N. Y. This new use of the mercury arc lamp on a large scale marks a radical step in electric lighting for decorative purposes. The incandescent lamp reached its climax for general illumination and for decorative effects at the Pan-American Exposition four years ago in Buffalo, and it is interesting to note that the latest development in this branch of the art should be successfully tried in the same city and using also Niagara power.

TRADE LITERATURE.

The Self-Cooling Water Tower.

A little leaflet issued by Messrs. B. Franklin Hart, Jr., & Co., 143 Liberty street, New York, gives brief facts relative to the Acme Self-Cooling Water Tower. This tower solves the problem of how to make a limited water supply keep the condensers going. It has highest efficiency, indestructibility, low cost as its leading features. The Acme is used successfully for steam or ammonia condensers, for ice plants, power plants, sugar-plantation work, etc., and some of the best-known firms in the country have adopted it. Write Messrs. Hart & Co. for information.

The Crescent City.

The Manufacturers' Record has received from Messrs. A. R. Blakely & Co., proprietors of the New St. Charles Hotel, New Orleans, La., a handsome book containing photographic views of the Crescent City, as New Orleans is familiarly called. The New St. Charles Hotel, one of the most modern and commodious hostleries of the South, is pictured first, and following it are views of the principal business buildings, municipal parks, Mississippi river scenes and various others of interest.

"Ridgepole" for July.

The Ridgepole for July is full of talking points for Rex Flintkote roofing. Dealers in roofing and other people interested in the roofing question cannot fail to be helped in their work by assimilating the facts which the Ridgepole presents for their consideration. The publishers of the pamphlet mentioned have been studying the subject of roofing for many years, and they are prepared to answer any questions that arise in relation to the best roofing for any specific purpose. They are Messrs. J. A. & W. Bird & Co. of Boston, manufacturers of Rex Flintkote roofing. Send for the July number of the Ridgepole.

Pennsylvania Metallic Packing.

Bearing metal and graphite is all there is in Pennsylvania metallic packing. Its manufacturer ribbons the metal and coats same with graphite. The ribbons are then wound into molds and formed into wedge-shaped rings under high pressure. Weight of ring is about the same as when cast. No grease or adhesive substance of any kind is used. The packing is made in any size from one-half inch up. This packing is flexible, sensitive, adjustable and practically frictionless. It is made by the Pennsylvania Metallic Packing Co., 901 Diamond Bank Building, Pittsburg, Pa., and now issuing a leaflet which tells full details regarding the article.

"A B C" Exhaust Fans.

Illustrated sectional catalogue No. 180 of the American Blower Co. tells about the "A B C" exhaust fans for the removal and conveying of shavings and dust, elevating and distributing of cotton and wool, removal of smoke and fumes, and for use in connection with special heating and drying plants. These fans have novel and original features tending to make them give a service which anyone who installs them will be more than pleased with. They have decided superiorities which not only the purchaser, but also the dealer will find to their advantage in operating and selling. The various types of the "A B C" fans are listed and illustrated, the accompanying descriptions of their construction and design being brief but complete. Manufacturers and other industrial workers who need heating, ventilating and drying equipments will find the American Blower Co.'s product covers the field thoroughly. Not only does the company manufacture the equipments, but also acts as engineer in planning and installing the plants when called upon to do so. Write the offices at Detroit, Mich., for any information you want in this direction.

The Coe Veneer Machinery.

The growth of the veneer industry during recent years has been remarkable. There have been causes for this, among which may be mentioned the invention and introduction of veneer machinery, which seems to have approached mechanical perfection as nearly as possible. When one thinks of veneer machinery one naturally thinks of the Coe Manufacturing Co. of Painesville, Ohio. This company was established in 1852, and has for years made a specialty of veneer-making machinery, its equipments in this class having earned a reputation for superior merit which is not surpassed. The company is at present sending out a complete catalogue of its veneer machines. Its book is a most creditable specimen of the printer's handicraft, and shows in a clear and comprehensive way the machines built, their points of superiority, special features, and excellencies of design. The machines are described in their natural order, the cutters coming first and the others following as they would in a mill. Besides the descriptions there is presented a quantity of information regarding the growth of the veneer industry and the opportunities which are offered in this avenue of activity to manufacturers and investors. The Coe Manufacturing Co. has an expensive and thoroughly up-to-date plant where its machines are designed and built, views of it being shown in the catalogue. Buyers of veneer machinery, whether experienced manufacturers or people who think of entering the industry to take advantage of the demand for veneers, are invited to write the Coe offices for any detailed information they may desire.

FINANCIAL NEWS

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., July 26.

The Baltimore stock market was generally dull during the past week, with comparatively little change in prices. The issue of the new Cotton Duck securities was a feature of the period, but being anticipated was received with no more than passing interest.

In the dealings United Railways common sold at 13; the trust certificates at 13 3/4 and 13 1/2; the incomes from 59 3/4 to 59; the 4s at 94 and 93 3/4; Consolidated Gas 6s, 108 1/4; the 5s at 115; Seaboard common, 23 to 22; the new common from 25 1/2 to 24 1/2; the rights from 1 3/4 to 1, reacting to 1 1/2; the new second preferred at 53 3/4 to 54; Seaboard 4s, 89 1/2 to 89 3/4; the 10-year 5s at 104 1/4 to 104 1/4; Cotton Duck 5s, 84 to 84 1/2; Consolidated Cotton Duck preferred, 34 to 33 3/4; G. B. S. 1sts, 61 1/4 to 61 3/4.

Bank stocks sold as follows: Maryland National, 22; Farmers and Merchants', 55; Howard, 12; First National, 14 1/2. International Trust sold at 142 1/4 to 143; Central Trust, 55 1/4, and Maryland Casualty at 58.

Other securities were traded in as follows: Atlantic Coast Line Consolidated 4s, 102 1/2; do, new 4s, certificates, 94 1/4 to 94 1/2; do, Connecticut 4s, certificates, 5-20s, 95 to 94 1/2; Northern Central stock, 100 1/2 to 101; Charleston Consolidated Electric 5s, 95 1/4 to 96 1/4; Norfolk Railway & Light 5s, 93 1/2; Maryland Telephone general mortgage 5s, 80 to 82 1/4; Virginia Deferred Brown Bros. certificates, 13 to 13 3/4; Baltimore Brick common, 13 to 11 3/4; do, preferred, 54; do, 5s, 84; Alabama Consolidated Coal & Iron preferred, 94; do, 5s, 90 1/2 to 90; Charleston & West Carolina 5s, 113; Georgia, Carolina & Northern 5s, 111 1/4; Virginia Midland 2ds, 111 1/4; North Carolina 4s, 102; Baltimore City 3 1/2s, 1930, 107 3/4; Baltimore, Catonsville & Ellicott's Mills 5s, 108 1/4; Baltimore Traction 5s, 117; Central of Georgia 1st incomes, 95 1/2; Norfolk Street Railway 5s, 106 1/2; Wilmington & Weldon 5s, 118 1/4; Maryland Telephone 5s, 97 1/2; Annapolis & Potomac 5s, 106 1/4; City & Suburban 5s, Baltimore, 113 3/4; Georgia & Alabama Consolidated 5s, 111 1/4; Georgia Pacific 1st 6s, 122 3/4; Macon Railway & Light 5s, 98; Maryland & Pennsylvania incomes, 56 1/2; do, 4s, 94 1/2; City & Suburban (Washington) 5s, 108; Baltimore City 3 1/2s, 1940, 109 3/4.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
July 26, 1905.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	105	106
Atlantic Coast Line of Conn.....	100	105	106
Georgia Sou. & Fla. 2d Pref.....	100	79	75
Maryland & Pennsylvania.....	100	21	22
Seaboard Railway Common.....	100	22 1/2	23
Seaboard Railway Preferred.....	100	42	43
United Railways & Elec. Co.....	50	13	14

Bank Stocks.	Par.	Bid.	Asked.
Drovers & Mech. Nat. Bank.....	100	200	200
Farmers & Mer. Nat. Bank.....	40	55	55
First National Bank.....	100	147 1/2	150
Maryland National Bank.....	20	21	22 1/2
Merchants' National Bank.....	100	165	173
National Bank of Baltimore.....	100	124	124
National Exchange Bank.....	100	182	182
National Howard Bank.....	10	11 1/2	11 1/2
National Mechanics' Bank.....	10	25 1/2	25 1/2
National Union Bank of Md.....	100	129	129
Third National Bank.....	100	126	126

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding & Trust.....	50	35	40
Central Real Estate & Trust.....	50	56	60
Fidelity & Deposit.....	50	154	154
International Trust.....	100	142	145
Mercantile Trust & Deposit.....	50	143	143
Union Trust.....	50	59	59
U. S. Fidelity & Guaranty.....	100	125	125

Miscellaneous Stocks.	Par.	Bid.	Asked.
Alabama Con. Coal & Iron.....	100	68	71
Ala. Con. Coal & Iron Pref.....	100	92	94
Consolidated Gas.....	100	83 1/2	85
Consolidated Coal.....	100	79	80
Consolidated Cotton Duck.....	50	11	12
Consolidated Cotton Duck Pref.....	50	33 1/2	34 1/2
G. B. & S. Brewing Co.....	100	84 1/2	91 1/4
Internat. Mer. Marine Pref.....	100	29	29

Railroad Bonds.

Albany & Northern 5s, 1916.....	92 1/2	92 1/2
Atlan. Coast Line 1st Con. 4s, 1922.....	102 3/4	102 3/4
Atlantic Coast Line 4s, Cfs., 1922.....	94 1/4	94 1/4
Atlantic Coast Line (Conn.) 5s.....	114	117
Atlantic Coast Line (Conn.) 4s.....	93	94 1/4
Balto. & Harrisburg Ext. 5s, 1938.....	112	115
Charleston & West. Car. 5s, 1946.....	112 1/2	113 1/2
Coal & Iron Railway 5s, 1929.....	109	109
Columbia & Greenville 1st 6s, 1916.....	115	115
Florida Southern 4s, 1919.....	98	99
Georgia & Alabama 5s, 1945.....	110 3/4	111 1/4
Georgia, Car. & North. 1st 5s, 1929.....	111	111 1/4
Georgia Pacific 1st 6s, 1922.....	122 3/4	123
Maryland & Pennsylvania 4s, 1951.....	94 1/2	95
Piedmont & Cum. 1st 5s, 1911.....	106	106
Potomac Valley 1st 5s, 1941.....	116	116
Richmond & Danville Gold 6s, 1915.....	115 1/4	115 1/2
Seaboard Air Line 4s, 1950.....	89 3/4	89 3/4
Seaboard Air Line 5s, 10-year, 1911.....	104 1/4	104 1/4
Virginia Midland 2d 6s, 1911.....	110 3/4	112
Virginia Midland 4th 3-4-5s, 1921.....	112 1/2	113
Virginia Midland 5th 5s, 1926.....	115 3/4	115 3/4
West. North Carolina Con. 6s, 1914.....	109 1/4	109 1/4
West Virginia Central 1st 6s, 1911.....	108 1/4	108 1/4
Wilmington, Col. & Aug. 6s, 1910.....	108 1/4	108 1/4
Wilmington & Wel. Gold 5s, 1935.....	117 3/4	118 1/2

Street Railway Bonds.

Annapolis & Potomac 5s, 1949.....	106 1/2	107
Augusta Rwy. & Elec. 5s, 1940.....	103 1/2	103 1/2
Baltimore City Passenger 4s, 1928.....	113 1/2	113 1/2
Baltimore Traction 1st 5s, 1929.....	117	118
Central Ry. Ext. 5s (Balt.), 1932.....	118 1/2	118 1/2
Charleston City Railway 5s, 1923.....	106	107
Charleston Con. Electric 5s, 1929.....	95 1/2	96 1/2
City & Suburban 5s (Wash.), 1948.....	107	108 1/2
Knoxville Traction 1st 5s, 1928.....	103	103
Lake Roland Elev. 5s (Balt.), 1942.....	119 1/2	119 1/2
Lexington Railway 1st 5s, 1949.....	101 1/2	101 1/2
Macon Rwy. & L. 1st Con. 5s, 1953.....	97 1/2	99
Metropolitan 5s (Wash.), 1925.....	119	119
Newport News & Old Pt. 5s, 1938.....	96	97 1/2
Norfolk Railway & Light 5s.....	93 3/4	93 3/4
Norfolk Street Railway 5s, 1914.....	109 1/4	110
United Railways 1st 4s, 1949.....	93 3/4	94
United Railways Inc. 4s, 1949.....	59	59 1/4

Miscellaneous Bonds.

Alabama Consol. Coal & Iron 5s.....	89	89 3/4
Consolidated Gas 6s, 1910.....	108 1/4	109
Consolidated Gas 5s, 1929.....	114 1/2	115 1/2
Consolidated Gas 4 1/2s, Cfs.....	102	102
G. B. & S. Brewing 1st 3-4s.....	61	62
G. B. & S. Brewing 2d Incomes.....	29	31
Maryland Steel 5s.....	96	96
Maryland Telephone 5s.....	96	97 1/2
Mr. V. & Woodly's Cot. Duck 5s.....	83 3/4	84 1/2
Mr. V. & Woodly's Cot. Duck Inc.....	33	33
United Elec. Light & Power 4 1/2s.....	96	96

SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh Mac-
Rae & Co., Wilmington, N. C., for
Week Ending July 24.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	88 1/2	89
Alken Mfg. Co. (S. C.).....	84	89
Anderson Cotton Mills (S. C.).....	107	107
Arkwright Mills (S. C.).....	110	121
Augusta Factory (Ga.).....	75	86
Avondale Mills (Ala.).....	100	105
Belt Mills (S. C.).....	109	107
Bliss Mfg. Co. (Ga.).....	102	102
Brandon Mills (S. C.).....	99	105
Buffalo Cotton Mills (S. C.).....	97 1/2	97 1/2
Buffalo Cotton Mills (S. C.) Pfd.....	97	99
Cabarrus Cotton Mills (N. C.).....	136 1/2	136 1/2
Chadwick Mfg. Co. (N. C.) Pfd.....	102	102
Chenola Mfg. Co. (S. C.).....	96	96
Clifton Mfg. Co. (S. C.).....	102	102
Clifton Mfg. Co. (S. C.) Pfd.....	102 1/2	102 1/2
Columbia Mfg. Co. (S. C.).....	96	96
Courtenay Mfg. Co. (S. C.).....	99 1/2	101 1/2
Dallas Mfg. Co. (Ala.).....	79	85
Darlington Mfg. Co. (S. C.).....	69	78
Eagle & Phenix Mills (Ga.).....	112	116
Easley Cotton Mills (S. C.).....	112	112
Enoree Mfg. Co. (S. C.).....	82 1/2	91
Enoree Mfg. Co. (S. C.) Pfd.....	97 1/2	102 1/2
Enterprise Mfg. Co. (Ga.).....	76	76
Exposition Cotton Mills (Ga.).....	175	200
Gaffney Mfg. Co. (S. C.).....	108	108
Gainesville Cotton Mills (Ga.).....	85	85
Granby Cot. Mills (S. C.) 1st Pfd.....	49	76
Graniteville Mfg. Co. (S. C.).....	148	163 1/2
Greenwood Cotton Mills (S. C.).....	95	100
Grendel Mills (S. C.).....	100	106
Henrietta Mills (N. C.).....	200	200
King Mfg. Co. J. P. (Ga.).....	93	100
Lancaster Cotton Mills (S. C.).....	100	105
Lancaster Cot. Mills (S. C.) Pfd.....	94	98 1/2
Lancaster Cotton Mills (S. C.).....	90	96
Laurens Cotton Mills (S. C.).....	178	178
Limestone Mills (S. C.).....	95	101
Lockhart Mills (S. C.).....	94	94
Louise Mills (N. C.).....	91	91
Louise Mills (N. C.) Pfd.....	102	102
Marlboro Cotton Mills (S. C.).....	91	91
Mayo Mills (N. C.).....	205	205
Mills Mfg. Co. (S. C.).....	96	96
Mills Mfg. Co. (S. C.) Pfd.....	100	100
Monaghan Mills (S. C.).....	97	103
Monarch Cotton Mills (S. C.).....	95	95
Newberry Cotton Mills (S. C.).....	122	122
Norris Cotton Mills (S. C.).....	99	101
Ode's Mfg. Co. (N. C.).....	100	100
Orangeburg Mfg. Co. (S. C.) Pfd.....	74	87
Orr Cotton Mills (S. C.).....	108	108
Pacolet Mfg. Co. (S. C.).....	146	151
Pacolet Mfg. Co. (S. C.) Pfd.....	103	103
Pelzer Mfg. Co. (S. C.).....	170	170
Piedmont Mfg. Co. (S. C.).....	171	176
Poe Mfg. Co. F. W. (S. C.).....	121	136
Raleigh Cotton Mills (N. C.).....	121	120
Richland Cotton Mills (S. C.) Pfd.....	49	49
Roanoke Mills (N. C.).....	129	129
Saxon Mills (S. C.).....	98	104
Shelley Mfg. Co. (Ga.).....	57	63
Southern Cotton Mills (N. C.).....	81	81
Sortan Mills (S. C.).....	132	132
Springsteen Mills (S. C.).....	90	100
Trian Mfg. Co. (Ga.).....	131	140
Tucapau Mills (S. C.).....	125	138
Union Cotton Mills (S. C.).....	125	126
Victor Mfg. Co. (S. C.).....	113	118
Warren Mfg. Co. (S. C.).....	99	101
Warren Mfg. Co. (S. C.) Pfd.....	102	102
Washington Mills (Va.).....	21	21
Washington Mills (Va.) Pfd.....	95	96
Wilney Mfg. Co. (S. C.).....	113	113
Wisconsin Mills (N. C.).....	125	125
Woodruff Cotton Mills (S. C.).....	97 1/2	100

The Farmers and Merchants' Bank of Marion, S. C., reports June 30 loans and discounts, \$373,985; cash on hand and due by banks, \$29,961; capital, \$100,000; undivided profits, \$23,250; deposits, \$236,761; total resources, \$413,133; W. J. Montgomery, president; W. M. Monroe and H. C. Graham, vice-presidents, and W. H. Cross, cashier.

New Corporations.

Local citizens are organizing a State bank at Josephine, Texas.

It is reported that another new bank is to be established at Bluefield, W. Va., with \$70,000 capital.

The Farmers and Merchants' Bank of Hennessey, O. T., capital \$5000 to \$10,000, has been granted a charter.

A private bank has been organized at Canton, Texas, with O. S. Houston of Fort Worth as president and Harry Houston, cashier.

The Citizens' Bank & Trust Co. of New Albany, Miss., capital \$100,000, has been incorporated by J. A. Smallwood, J. B. Purnell and others.

The Dimmitt County State Bank of Carrizo Springs, Texas, is expected to begin business about August 15. W. F. McCabb is interested.

Plans for the Alabama State Bank, to be located at Florence, Ala., are reported completed. Mason J. Dillard and R. Lee Glenn are the promoters.

The Bank of Fairmount has been organized at Fairmount, Ga., with \$15,000 capital. William Dew is president, and H. B. Warlick, vice-president.

The Waco Deposit Bank has been organized at Waco, Ky., with \$15,000 capital. C. L. Serey is president, and R. M. Roland, Bardstown, cashier.

The Mound Bayou Loan & Investment Co. has been organized at Mound Bayou, Miss., with \$50,000 capital. I. T. Montgomery is the principal promoter.

On August 1 a new State bank with \$15,000 capital will begin business at Brandenburg, Ky., with J. H. Trent, Jr., president, and J. R. Willet, cashier.

The People's Penny Savings Bank of Yazoo City, Miss., capital \$10,000, has applied for a charter. The incorporators are H. H. King, G. W. Gatlin and others.

The First National Bank of Beaver, O. T., has begun business with the following officers: J. C. Bryson, president; J. E. George, vice-president, and Hubert Judy, cashier.

The Pendleton Investment Co. of St. Louis, Mo., capital \$20,000, has been incorporated by Simon Van Raalte, Abe Cohn, B. Frank Hart and William J. McDonald.

The Citizens' Banking Co. has been organized at Joshua, Texas, with \$25,000 capital. The officers are Angus McMillan, president; F. P. West, vice-president, and C. C. West, cashier.

A State bank with \$15,000 capital has been organized at Elkmont, Ala., and business is expected to begin October 1 with W. B. Vaughan as president and John R. Butler, cashier.

The Sterling Building and Loan Association of Charleston, S. C., has been granted a commission; capital \$150,000. The incorporators are R. G. Rhett, T. T. Hyde and Geo. H. Moffett.

The Brand Banking Co. of Lawrenceville, Ga., capital \$35,000, has begun business with the following officers: E. M. Brand, president; T. R. Powell, vice-president; L. M. Brand, cashier.

The Gibson Building & Investment Co. of Birmingham, Ala., capital \$15,000, has filed articles of incorporation. The incorporators and directors are George A. Gibson, C. S. Ellis and F. H. Patterson.

The MANUFACTURERS' RECORD is informed by Mr. A. H. Longino, president of the Capital City Bank & Trust Co. of Jackson, Miss., that business will not begin before the 1st or 15th of September.

[For Additional Financial News, See
Pages 34 and 35.]

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